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Final Environmental Assessment

livestock utilization of the fish creek ranch allotment including duckwater trail

United States Department of the Interior
Bureau of Land Management
Battle Mtn. & Ely Districts, Nevada

Office Battle Mountain District

Resource Area Shoshone/Eureka

EA Number NV060-EA0-4

Decision Record/Rationale

Decision

Based on the environmental assessment (EA), a net benefit to the human environment would result from implementation of the Nevada Cattle Company Interim Management Agreement. Therefore, the agreement is adopted in it's entirety.

Rationale

The decision is not the same as the proposed action but, it is a modification of the permittee's Alternative (See attached Agreement for more detail).

All terms and conditions as outlined in the Agreement are to be addressed as mitigating measures.

It will be necessary to prepare a site specific EA, Cultural Resources, Visual Resources contrast report and Wilderness clearance prior to the construction of any holding pens or fences as stated in the agreement.

An Environmental Impact Statement is not required for this action and the State Clearinghouse has not been contacted.

Approved by ______________ Date [illegible]/80
Colin P. Christensen
Area Manager

Concurred by Gene Nodine Date 3/18/80
Gene Nodine
District Manager

THE NEVADA CATTLE COMPANY INTERIM GRAZING MANAGEMENT AGREEMENT

We, the undersigned, agree to the following interim grazing management plan. We understand that this grazing management plan will be in effect for the interim period from the date of this agreement until completion of the Environmental Statements for the Shoshone/Eureka and Egan Resource Areas on September 30, 1984 and that this plan will in no way affect any final decisions based on those completed Environmental Statements.

We understand that the operational plan used to formulate this interim grazing management plan was taken from the Ranchers Proposal submitted to the Battle Mountain District Office in October, 1979 by the Nevada Cattle Company. The following terms and conditions are the collective sum of stipulations set forth in the Rancher Proposal with some variation in those stipulations deemed necessary by the Bureau of Land Management for the proper management of the existing resources.

TERMS AND CONDITIONS

1. During the fiscal year 1980 the Bureau of Land Management will supply enough materials to construct four 40-acre holding pens. These pens are to be located near the bottom of Twin Pinyon Gulch, at the bottom of Big Fault Wash, at Willow Creek, and the Eight Mile Seeding (see attached map).
   The Bureau of Land Management will deliver the necessary materials to the Fish Creek Ranch Headquarters. These holding pens will be built to Bureau Specifications. (See attached specifications)
   The Bureau of Land Management will construct a fence approximately 6 miles in length running along the boundary of the north end of the Sand Springs Grazing Allotment. (See attached map for the approximate location of the 40-acre pens and the boundary fence).
   The boundary fence is to have a gate every 1 mile and gates at any point that may entrap cattle. The gates at entrapment points are to be left open during such times as the Nevada Cattle Company deems necessary to allow cattle to drift to water and feed. The fence material and construction will be supplied by the Bureau of Land Management at no cost to the Nevada Cattle Company. The maintenance of said fence is the responsibility of the Nevada Cattle Company.

2. The Nevada Cattle Company will complete the spring movement of cattle by April 30 of each year. Five days will be allowed on each drive to move the cattle from the new fence between Ely and Battle Mountain Districts to the Fish Creek Ranch and/or Kitchen Meadows, unless severe weather conditions arise or by mutual agreement between both parties.

3. The Nevada Cattle Company will complete the Fall movement of cattle by December 31 of each year. A maximum of five days will be allowed to move the cattle from the Fish Creek Allotment to the new boundary fence.

4. The proposed route and holding pens will be used for both Spring and Fall movement throughout the interim management period. The existing route will not be used during the interim management period. It is understood that the Nevada Cattle Company is not relinquishing any privileges or rights to the existing route through Little Smokey Valley or to AUMs on the Duck Water Allotment.

5. The Nevada Cattle Company will provide both feed and water at the holding pens during the movement of livestock north and south.

6. The Nevada Cattle Company will disperse their permitted cattle in accordance with the attached flow chart.

7. Antelope Valley will be deferred from grazing, except for movement to and from the private lands, to the Forest Service Allotments and to the Willow Ranch Allotment until Fall when a two week period of drift will be allowed for livestock returning to Kitchen Meadows from the Forest Service Allotments and the Willow Ranch Allotment as outlined in the attached Cattle Flow Chart.

8. Fish Creek Valley, south of the Fish Creek Ranch, will be rested from all Spring and Summer grazing except when necessary to move the livestock to the Fish Creek Ranch and to the public land north of the Fish Creek Ranch as outlined in the attached Cattle Flow Chart.

9. Livestock will be allowed to graze the white sage areas north of the Fish Creek Ranch for a one month period during the Spring from May 10 to June 9 and again for a five week period during the Fall from October 1 to November 6. Livestock will be held on private lands at the Fish Creek Ranch from November 7 until they begin the drive south to the winter range.

mcH
JGW

10. Eight Mile Seeding will be grazed from May 1 to June 15 as outlined in the attached Cattle Flow Chart.

11. Nine Mile Mountain, Schaffer Ranch, Ratto Canyon, Secret Canyon, Pleasant Valley and that use authorized in the Arambel Allotment will be grazed in accordance with the Cattle Flow Chart.

12. Cold Creek livestock will be grazed in accordance with the Cold Creek Allotment Management Plan.

13. Cattle moved into the Dry Lake Well area will be dispersed out of the Dry Lake area within seven days after arrival.

14. Willow Ranch livestock will be grazed in accordance with the Willow Ranch Allotment Management Plan.

15. The Bureau of Land Management and the Nevada Cattle Company both recognize serious damage has been done to the range by wild horse use. As the Bureau recognizes its responsibility for the control of wild horses it agrees to remove the excess wild horses from the area in accordance with the Fish Creek Wild Horse Gathering Plan. The Bureau recognizes that as a result of this agreement the Nevada Cattle Company, for the term of this agreement, is significantly stocking below its preference for livestock use and that no further reductions in authorized grazing use is forseen by the Bureau.

mcH
JGW

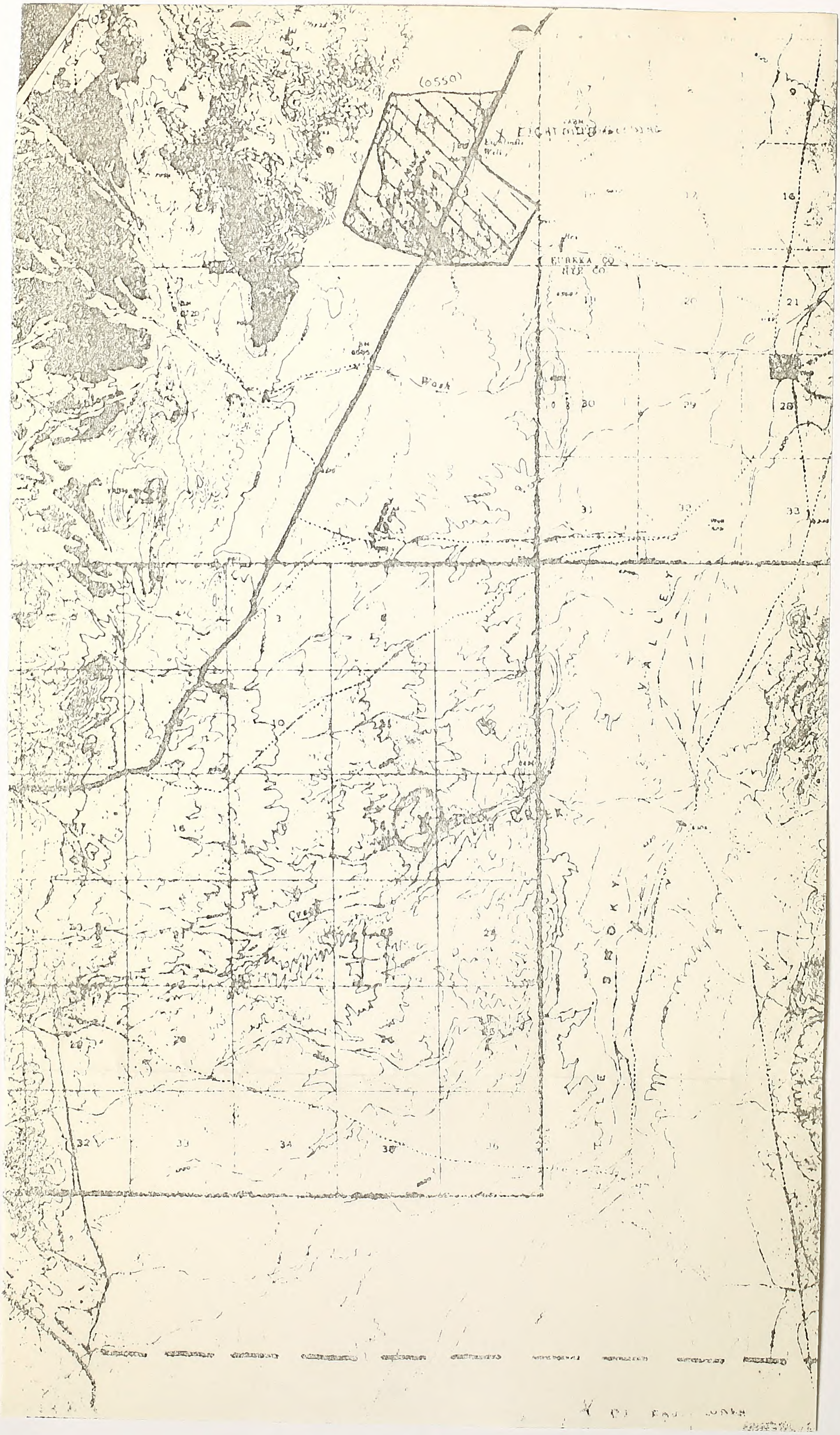
This agreement is to be considered as part of the terms and conditions of all grazing licenses issued to the Nevada Cattle Company during the interim management period.
Violation of the terms and conditions without prior approval from the Area Manager will constitute reason for trespass action.

It is understood that this agreement is subject to annual review and that the terms and conditions of this agreement may be modified. Any modifications will be formulated in cooperation with the Nevada Cattle Company, the Ely District Office and the Battle Mountain District Office of the Bureau of Land Management.

2-15-80 John J Cobb Jr Gen Mgr
DATE For The Nevada Cattle Company

2/15/80 Michael J Mitchell Acting
DATE District Manager, Battle Mountain

2/20/80
DATE District Manager, Ely



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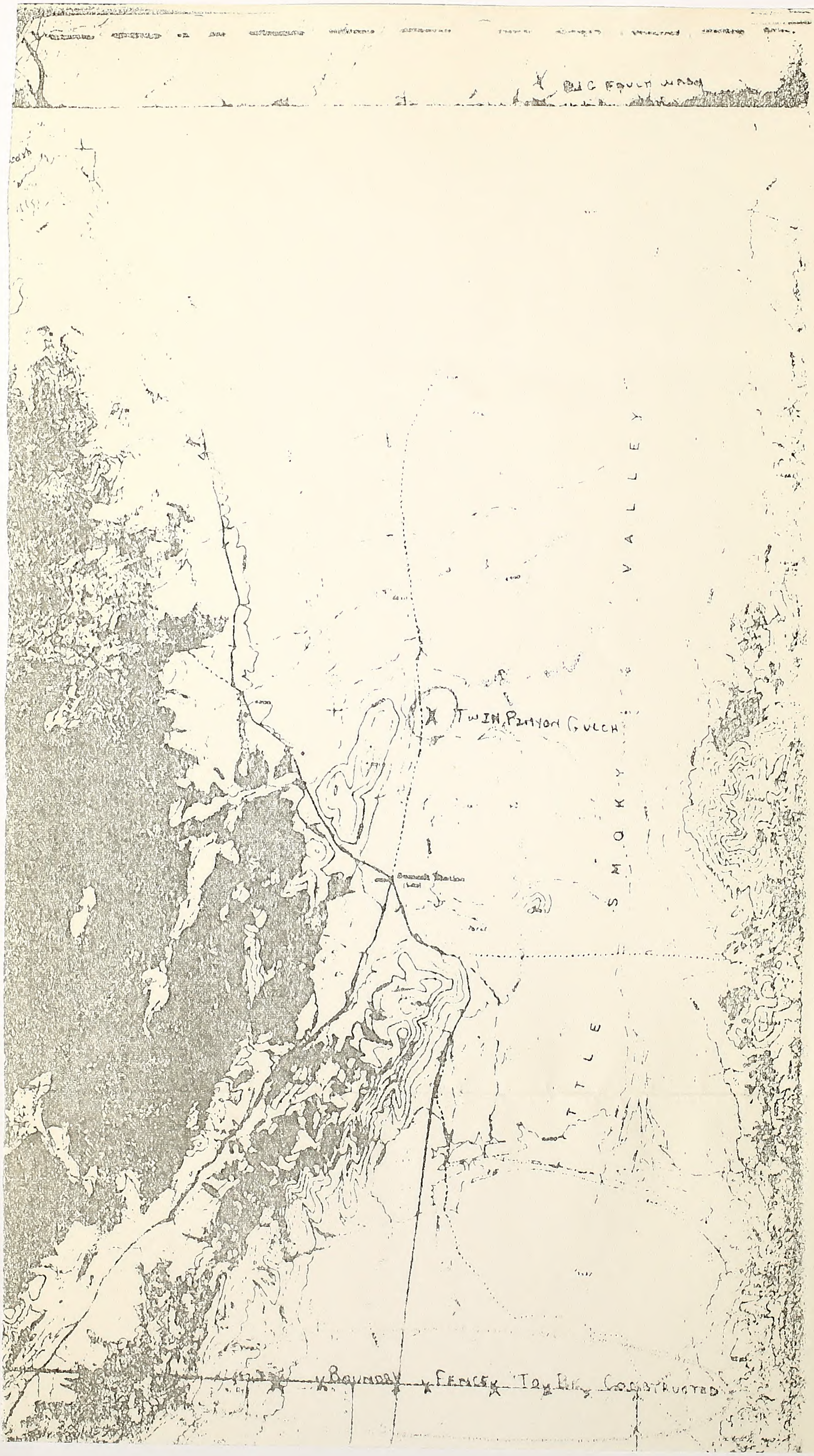
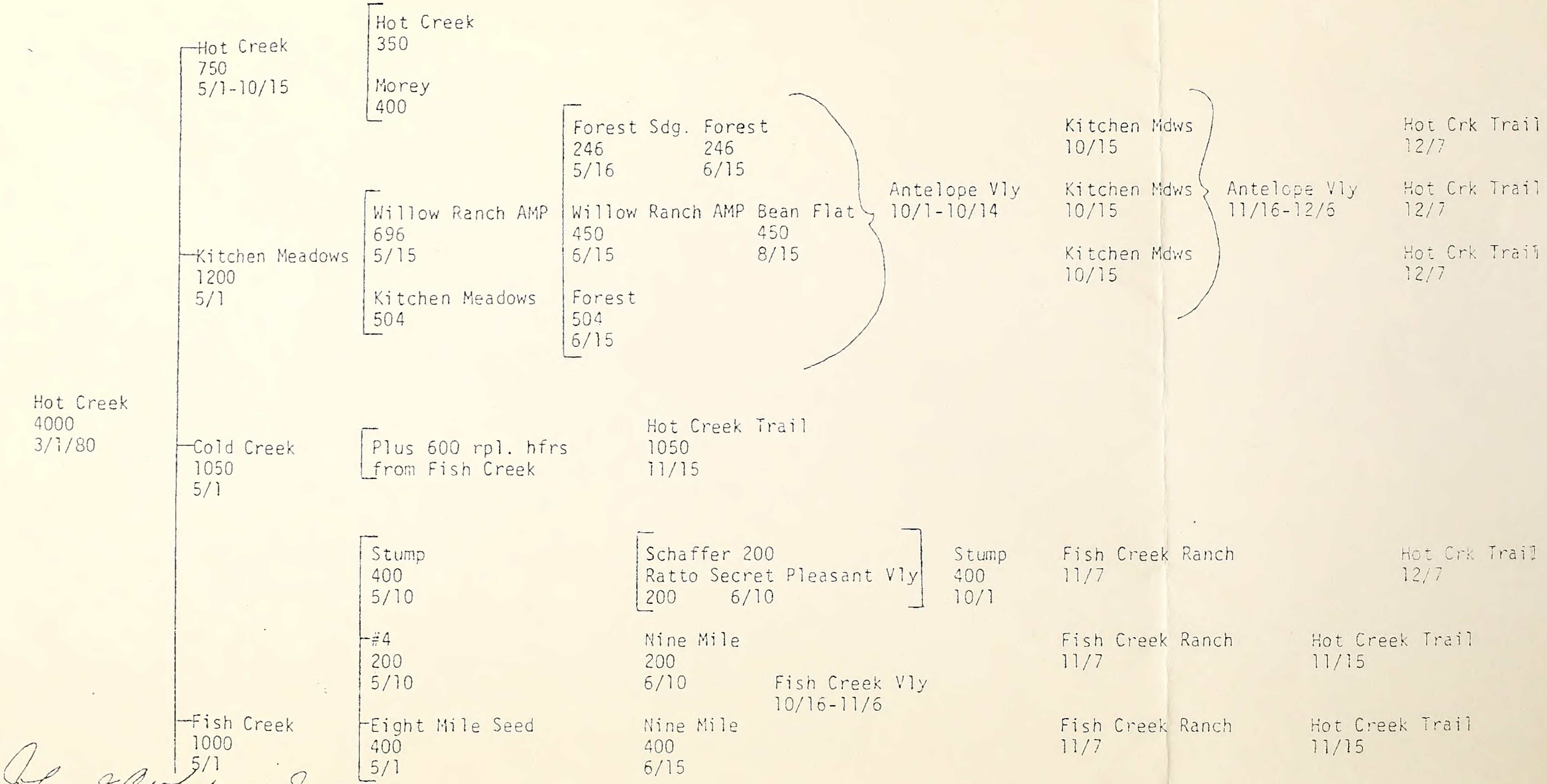

BIG FOUCH WASH
TWIN PINYON GULCH
SMOKY VALLEY
TTLE
BOUNDARY FENCE TO BE CONSTRUCTED

CATTLE FLOW CHART



2-15-80
DATE

John L Colby
NEVADA CATTLE COMPANY

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UNITED STATES

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BUREAU OF LAND MANAGEMENT

BATTLE MOUNTAIN DISTRICT

SHOSHONE/EUREKA RESOURCE AREA

ELY DISTRICT

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ENVIRONMENTAL ASSESSMENT
FINAL

LIVESTOCK UTILIZATION OF THE FISH CREEK RANCH ALLOTMENT AND DUCKWATER TRAIL

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DECEMBER 14, 1979

Prepared by:

Battle Mountain District

Kelly M. Madigan, Environmental Coordinator
Richard Depaoli, Supervisory Range Conservationist
Joseph Deschamp, Range Specialist
Patrick Welch, Archaeologist
Mark Phillips, Wildlife Biologist
Cheryl Lane, Soil Socientist

Ely District

Kathy Kushler, Range Conservationist
Mike Perkins, Wildlife Biologist

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INTRODUCTION - PURPOSE AND NEED FOR ACTION

The spring/fall ranges within the Fish Creek Ranch Allotment and along the Duckwater Trail are being severely overutilized. The purpose and need for this environmental assessment is to analyze different methods for controlling this overutilization. The Fish Creek Ranch Allotment is within the Battle Mountain District and the Duckwater Trail is within the Ely District. (See Appendix 1, Map A).

I. PROPOSED ACTION AND ALTERNATIVES

The proposed action and alternatives will be analyzed in two parts, the Fish Creek Ranch Allotment and the Duckwater Trail.

Fish Creek Ranch Allotment

A. Proposed Action

1. To establish a period of use on the Fish Creek Ranch Allotment: (See Appendix II, Map A).

    a. Summer Range: June 16 to September 15.

    b. Spring/Fall Range: September 16 to November 30.

    Summer range is identified as that part of the Antelope and Fish Creek ranges above 6,600 feet elevation. Spring/fall range is that part of the Antelope, Little Smoky, and Fish Creek valleys and mountain benchlands below 6,600 feet elevation.

2. To establish the period of use of April 15 to June 15 for the base property requirement in the Fish Creek Ranch Allotment. At this time all livestock will be off the public lands except as authorized by licensed trail use.

3. To require a total active use of approximately 11,200 AUMs within the Fish Creek, Willow Ranch, Pancake and Duckwater allotments, which will result in approximately

17,000 AUMs of total regular non-use in the same allotments (See Appendix I, Map A).

B. Alternatives

1. No Action Alternative

To allow grazing within the Fish Creek Ranch Allotment as it presently exists.

2. Seeding Alternative

To plow and seed approximately 3,000 acres in Fish Creek and Antelope Valleys in order to relieve grazing pressure and improve livestock production (See Appendix 2, Map B).

3. Permittees Alternative

The permittees alternative involves a recommendation for grazing use during the 1980 grazing season (See Appendix 3).

Duckwater Trail

A. Proposed Action

1. To trail livestock down and back along the proposed trail route which is located high on the benches west of the existing trail (See Appendix 4, Map A).

2. To establish several specific overnight fenced holding pens of approximately 40 acres (maximum) in size (See Appendix 4, Map A). Livestock will be required to be moved from one pen to another in one days time.

B. Alternatives

1. Trailing Alternative

To trail south along the existing trail in the fall of the second year, and to return in the spring along the proposed trail route (See Appendix 4, Map A).

2. No Action Alternative

To continue to trail livestock along the existing trail (See Appendix 4, Map A).

3. Trail Closure Alternative

To close all trails and require the permittee to haul livestock.

4. Haul and Trail Alternative

To require the permittee to haul cattle north in the spring and trail south in April along the proposed route (See Appendix 4, Map A).

II. AFFECTED ENVIRONMENT

A. Climate

Average annual precipitation in the form of rain and snow varies from approximately eight inches in the valleys to approximately 13 inches in the higher elevations. Most of the precipitation falls from September through May. Late spring rains and summer thundershowers provide moisture important for growth, but are not a major share of the total annual precipitation. Temperatures vary from near 100 degrees F. in the summer to 0 degrees F. and below in the winter. Spring temperatures are generally low and summers are typically hot and dry. Windy conditions can prevail at anytime of the year but are most common during April to June. Air and water quality is generally good.

B. Topography

The area consists of the Antelope Range and the Fish Creek Range with maximum elevations of over 10,000 feet. Terraces and alluvial fans occur at elevations of 6,300 feet. White sage flats are flood plains of alluvial fans occurring at elevations between 6,100 feet and 6,300 feet.

C. Soils

The soils found in the allotment vary in nature based on relief, age, climate, and parent material.

Basically the soil types can be divided into mountain slopes, alluvial fans, terraces and flood plains.

The soils found on flood plains are mostly of loamy particle size classes, mixed mineralogy orgins and mesic temperature regime. The erosion hazard is moderate to high and soluble salts vary from medium to high.

Alluvial fan and terrace soils are loamy-skeletal to coarse-loamy in particle size class with mixed mineralogy and mesic soil temperature regimes. With the erosion hazard moderate, the soils are well drained and only small amounts of soluble salts exist.

Soils found on mountain slopes vary from loamy-skeletal to coarse-loamy particle size class and are usually shallow to lithic or paralithic. Mixed mineralogy classes occur and a frigid soil temperature regime prevails. The erosion hazard is slight.

Soils occuring in the white sage flats in the allotment currently support sparse vegetation primarily for range use. The productivity of these soils for other uses is limited due to soluble salt levels in the flood plains and high slope percentages in the shallow mountain soils.

D. Vegetation/Range Condition and Trend

Fish Creek Ranch Allotment and Duckwater Trail

There are 12 vegetation associations within the boundaries of the Fish Creek Ranch Allotment and Duckwater Trail. These associations are as follows:

1. White sage - *Ceretoides lanata*
2. Nuttall saltbush - *Atriplex nuttalli*
3. Yellow rabbitbrush - *Chrysothamnus viscidiflorus*
4. Black greasewood - *Sarcobatus vermiculatus*
5. Black sagebrush - *Artemisia nova*
6. Rubber rabbitbrush - *Chrysothamnus nauseosus*

7. Shadscale - Atriplex confortifolia
8. Big sagebrush - Artemisia tridentata
9. Pinyon/Juniper
10. Mountain mahogany - Cercocarpus, spp.
11. Meadow
12. Aspen - Populous, spp.

Many variations can be found within these associations. These variations are relative to changes in elevation, precipitation and soil types which create the transitional zones between ecotypes.

To be more site specific these vegetation associations will be described as they occur in four different areas within the allotment. These areas are, the Antelope Range, Fish Creek Range, Antelope Valley and Fish Creek Valley (including Little Smoky Valley) (See Appendix 5, Map A).

The data used to analyze the following vegetation associations was taken from the Forage Survey Type Write-Up forms (based on ocular reconnaissance range surveys) complied in 1963. Data used to compute plant composition by association were taken from a sample of the write-up sheets for the area. These plant composition percentages are approximate figures. The percentage of each of the four site specific areas occupied by each vegetation association was estimated from the 1963 vegetative type map (See Appendix 5, Map B for general locations of vegetation types).

Antelope Range

There are six vegetation associations found in the Antelope Range. These are black sagebrush, pinyon/juniper, big sagebrush, mountain mahogany, aspen and meadow assocations. The black sagebrush association is the largest, comprising approximately 48% of the vegetation found in the Antelope Range. This association is comprised of a well diversified species grouping (See Table 2-1). Thirteen grass species and thirteen forb species are associated with the black sagebrush type. The dominant shrub species is black sagebrush. Big sagebrush is the subdominate shrub with varying amounts of pinyon and juniper scattered throughout.

TABLE 2-1

Antelope Range

Vegetation Composition of Major Species by Association

Association	Species	Percent Composition
Black Sagebrush	Sandberg's bluegrass - *Poa secunda*	4
	Squirreltail - *Stanion hystrix*	3
	Western wheatgrass - *Agropyron smithii*	2
	Bluebunch wheatgrass - *Agropyron spicatum*	1
	Thurber needlegrass - *Stipa thurberiana*	1
	Indian ricegrass - *Oryzopsis hymenoides*	1
	Great Basin wildrye - *Elymus cinereus*	1
	Globemallow - *Sphaeralcea*, spp.	T
	Buttercup - *Ranunculus*, spp.	T
	Phlox - *Phlox* spp.	T
	Buckwheat - *Eriogronum* spp.	T
	Pricklypear - *Epuntia* spp.	T
	Lupine - *Lupinus* spp.	T
	Black sagebrush - *Artemesia nova*	41
	Big sagebrush - *Artemesia tridenta*	24
	Little rabbitbrush - *Chrysothamnus*, spp.	8
	Mountain mahogany - *Cercocarpos*, spp.	5
	Snowberry - *Symphoricarpos albus*	2
	Serviceberry - *Amelancier alnifolia*	T
	Wild rose - *Rosa* spp.	T
	Chokecherry - *Prunus virginiana*	T
	Bitterbrush - *Purshia tridentata*	T
	Aspen - *Populous* spp.	
	Pinyon - *Pinus monophylla*	
	Juniper - *Juniperus* spp.	
Pinyon/Juniper	Sandberg's bluegrass	3
	Thurber needlegrass	T
	Great Basin wildrye	T

	Indian ricegrass	T
	Squirreltail	T
	Western wheatgrass	T
	Idahoe fescue - festuca idahoensis	T
	Annuals	1
	Phlox	T
	Buckwheat	T
	Globemallow	T
	Lupine	T
	Black sagebrush	53
	Big sagebrush	36
	Little rabbitbrush	T
	Spiny hopsage - Grayia spinosa	T
	Rubber rabbitbrush	T
	Snowberry	T
	Mormon tea - Ephedra spp.	T
	Pinyon	
	Juniper	
Big Sagebrush	Squirreltail	T
	Needle and thread grass - Stipa comata	T
	Indian ricegrass	1
	Sandberg bluegrass	T
	Halogeton - Halogeton glomeratus	5
	Big sagebrush	89
	Black sagebrush	1
	Little rabbitbrush	1
	Rubber rabbitbrush	1
	Spiny hopsage	T
	White sage	2
	Horsebrush - Tetradymia, spp.	T
	Pinyon	
	Juniper	

*T: Trace, less than 1 percent.

Source: Shoshone/Eureka Resource Area, Range Survey Information, 1963.

The association is found on the high ridges and mountain tops as well as the benchlands below the pinyon/juniper type along the east and north side of the Antelope Range. A more diversified species composition is found in the association at higher elevations due to better quality soils and higher precipitation.

The second largest association within the Antelope Range is the pinyon/juniper type which comprises approximately 44% of the vegetation. Understory vegetation varies from moderate cover at the higher elevations to virtually non-existant cover on some of the lower sites. The grass understory is well diversified at the higher elevations but most are only remnent species comprising less than one percent of the plant composition. Annual forbs comprise the majority of the forb understory as perennial forbs are less than one percent of the plant composition. Black sagebrush and big sagebrush codominate the shrub understory. Pinyon and juniper dominate the stand.

This vegetation association is found in the elevational zone from 6,800 feet to approximately 8,000 feet extending up both the east and west side and the north face of the Antelope Range.

The big sagebrush association comprises approximately 6% of the vegetation located within the Antelope Range. Understory in this type is mostly restricted to the actual sagebrush cover leaving large barren interspaces. The most abundant forb species is halogeton. Big sagebrush dominates the association.

This association is found in the drainage bottoms on the east and north sides of the Antelope Range.

The remaining vegetative associations are smaller in size, each comprising less than one percent of the total area. These are the mountain mahogany, aspen, and meadow associations. The mountain mahogany types occurs on high ridge tops and rocky steep slopes. Understory is sparse, usually annual forbs. Some snowberry, big sagebrush, black sagebrush, sandbergs bluegrass and thurbers needlegrass can be found throughout the association.

The aspen stands are located along creek bottoms and on north and east facing steep slopes normally above the 8,000 foot level. This type is important from the livestock stand point as poisonous tall larkspur is intermingled throughout the stand, especially in the higher elevations. Understory species commonly associated with aspen are columbine, geranium, balsam root, wooly mules ear, Kentucky bluegrass, mountain brome, snowberry, and Oregon grape.

Meadow areas border perennial streams and spring areas. Big sagebrush, black sagebrush and little rabbitbrush are found scattered throughout the meadow edges. Iris has expanded throughout the meadows. Major vegetation species are sedges, Kentucky bluegrass, redtop, polypogon and mountain muhly.

Fish Creek Range

Five vegetation associations comprise the vegetation in the Fish Creek Range. These are pinyon/juniper, black sagebrush, big sagebrush, and mountain mahogany (See Table 2-2). Pinyon/juniper is the largest association comprising approximately 68% of the total vegetation cover. Density of understory vegetation is dependent upon total pinyon/juniper canopy cover. Many areas approach a "closed community" where the tree canopy has excluded all but remanant understory species. In less dense stands of pinyon juniper the type has as many as thirteen different grass species.

Annual forbs comprise the majority of the forb understory. Pinyon and juniper dominate the type. Black sagebrush dominates the understory.

The pinyon/juniper association is found as low as 6,100 feet in elevation and ranges to the top of the Fish Creek Range (over 8,900 feet).

TABLE 2-2

Fish Creek Range

Vegetation Composition of Major Species by Association

Association	Species	Percent Composition
Pinyon/Juniper	Indian ricegrass	1
	Sandberg bluegrass	1
	Bluebunch wheatgrass	1
	Phlox	T*
	Buckwheat	T
	Globemallow	T
	Lupine	T
	Black sagebrush	64
	Big sagebrush	10
	Mountain mahogany	9
	Little rabbitbrush	5
	Bitterbrush	T
	Serviceberry	T
	Snowberry	T
	Pinyon	
	Juniper	
Black Sagebrush	Indian ricegrass	2
	Needle-and-Thread	T
	Galleta grass - Hilaria jamesii	T
	Squirreltail	T
	Halogeton	T
	Annuals	T
	Globemallow	T
	Phlox	T
	Black sagebrush	85
	Big sagebrush	1
	Little rabbitbrush	3
	Shadscale	5
	Mormon tea	1
	Pinyon	
	Juniper	

Big Sagebrush	Sandberg bluegrass	7
	Western wheatgrass	2
	Cheatgrass - *Bromus tectorum*	2
	Bluebunch wheatgrass	1
	Great Basin wildrye	T
	Squirreltail	T
	Indian ricegrass	T
	Mountain brome - *Bromus marginatus*	T
	Needle-and-Thread grass	T
	Annual forbs	2
	Indian paintbrush	T
	Halogeton	T
	Buckwheat	T
	Poverty weed - *Iva axillaris*	T
	Lupine	T
	Big sagebrush	64
	Black sagebrush	10
	Little rabbitbrush	4
	Mountain mahogany	T
	Rubber rabbitbrush	T
	Bitterbrush	T
	Serviceberry	T
	Pinyon	
	Juniper	
Mountain Mahogany	Needle-and-thread	2
	Great Basin wildrye	2
	Cheatgrass	1
	Indian ricegrass	1
	Sandberg bluegrass	1
	Squirreltail	T
	Western wheatgrass	T
	Bluebunch wheatgrass	T
	Annual forbs	1
	Mountain mahogany	44
	Big sagebrush	15
	Black sagebrush	13
	Little rabbitbrush	6
	Snowberry	3
	Bitterbrush	2

*T: trace, less than 1 percent.

Source: Shoshone/Eureka Resource Area, Range Survey Information, 1963.

The black sagebrush association is the second largest vegetative type in the range, comprising approximately 23% of the vegetation. Pinyon, juniper, and mountain mahogany can be found scattered throughout the association at the higher elevations.

The black sagebrush type is found on the benchlands below the pinyon/juniper belt. It is also found intermingled throughout the pinyon/juniper association.

Approximately 6% of the vegetation on the range is the big sagebrush association. It is found in the drainage bottoms throughout the range and is also located on the open ridges around Pinto Summit and in Spring Valley.

The mountain mahogany association makes up approximately 3% of the vegetation. It is found on steep slopes and rocky ridge tops. Understory vegetation is sparse. Two subspecies of curlleaf mountain mahogany are present. These being *Cercocarpus ledifolius ledifolius* and *Cercocarpus ledifolius intricatus*.

The meadow association is found in the creek bottoms and around spring areas. It is small in size, comprising less than 1% of the total vegetation within the mountain range. Plant composition is basically the same as that described in the Fish Creek Range meadow description.

Antelope Valley

There are five vegetation associations located in Antelope Valley. Big sagebrush comprises approximately 38% of the vegetation, shadscale approximately 27%, black sagebrush approximately 19%, greasewood 8% and white sage 8% (See Table 2-3). The big sagebrush associations are located on the west side of Antelope Valley on the alluvial benchlands of the Monitor Range. This association is also found on both sides of the valley extending up the bottoms of the drainage patterns.

TABLE 2-3

Antelope Valley

Vegetation composition of Major Species by Association

Association	Species	Percent Composition
Big Sagebrush	Indian ricegrass	T*
	Squirreltail	T
	Galleta	T
	Halogeton	2
	Globemallow	T
	Pricklypear	T
	Big sagebrush	93
	Little rabbitbrush	3
	Spiny hopsage	T
	Shadscale	T
	Black sagebrush	T
Shadscale	Indian ricegrass	T
	Squirreltail	T
	Sandberg bluegrass	T
	Halogeton	2
	Globemallow	T
	Annuals	T
	Pricklypear	T
	Shadscale	68
	Little rabbitbrush	7
	Bud sagebrush - *Artemesia spinescens*	5
	White sage	4
	Big sagebrush	1
	Black sagebrush	T
	Greasewood	T
Black Sagebrush	Sandberg bluegrass	2
	Indian ricegrass	T
	Squirreltail	T
	Galleta	T

	Halogeton	1
	Annuals	T
	Globemallow	T
	Black sagebrush	71
	White sage	14
	Little rabbitbrush	5
	Big sagebrush	4
	Rubber rabbitbrush	T
	Spiny hopsage	T
	Shadscale	T
White Sage	Indian ricegrass	T
	Halogeton	2
	Annuals	T
	White sage	64
	Little rabbitbrush	13
	Black sagebrush	9
	Nuttall saltbush	6
	Big sagebrush	4
	Shadscale	1
Greasewood	Saltgrass - _Distichlis_, spp.	1
	Great Basin wildrye	T
	Halogeton	1
	Annuals	T
	Poverty weed	T
	Greasewood	85
	Rubber rabbitbrush	9
	Shadscale	3
	Bud sagebrush	1
	Big sagebrush	T
	Nuttall saltbush	T

*T: Trace, less than 1 percent.

Source: Shoshone/Eureka Resource Area Range Survey Information, 1963.

The shadscale association is found in the central portion of the valley. Only trace amounts of three grass species are present in the association.

The black sagebrush is located on the south and west benchlands of the Fish Creek Range and on the north benchland of the Antelope Range.

Approximately 8% of the valley vegetation is the white sage association. Understory in this association is limited to annual forbs and a trace of Indian ricegrass.

The white sage association is confined to the low drainage areas along the east side of the valley, in areas of greater soil depths.

The greasewood association occupies the remaining 8% of the total vegetation within the valley. This type is confined to the major drainage, running from south to north in Antelope Valley.

Fish Creek Valley

Eight vegetation associations occupy the Fish Creek Valley. These associations are shadscale, which comprises approximately 43% of the vegetation, black sagebrush 23%, white sage 14%, little rabbitbrush 12%, big sagebrush 5%, greasewood 2%, nuttall saltbush 1% and rubber rabbitbrush, less than 1% (See Table 2-4).

The shadscale association occupies the central portion of the Fish Creek Valley. It is dominated by shadscale which comprises approximately 79% of the total plant composition.

The black sagebrush association is located on the northern and eastern benches above the valley floor. Black sagebrush dominates the stand with approximately 64% of the composition.

The white sage association occupies the central portion of the valley.

The little rabbitbrush associations are located throughout the central and eastern portion of the

TABLE 2-4

Fish Creek Valley

Vegetation Composition of Major Species by Association

Association	Species	Percent Composition
Shadscale	Indian ricegrass	1
	Squirreltail	T*
	Galleta	T
	Great Basin wildrye	T
	Summer cypress	1
	Globemallow	T
	Annuals	T
	Halogeton	T
	Shadscale	79
	Little Rabbitbrush	8
	White sage	3
	Black sagebrush	3
	Bud sagebrush	2
	Rubber rabbitbrush	T
	Spiny hopsage	T
	Nuttall saltbush	T
	Big sagebrush	T
Black Sagebrush	Indian ricegrass	2
	Squirreltail	T
	Galleta	T
	Needle and thread grass	T
	Halogeton	T
	Globemallow	T
	Annuals	T
	Black sagebrush	64
	Little rabbitbrush	12
	White sage	7
	Big sagebrush	7
	Shadscale	3
	Bud sagebrush	1
	Mormon tea	T
	Rubber rabbitbrush	T
	Pinyon	
	Juniper	

White Sage	Indian ricegrass	T
	Globemallow	T
	Halogeton	3
	Annuals	T
	White sage	71
	Big sagebrush	11
	Little rabbitbrush	7
	Nuttall saltbush	6
	Black sagebrush	1
	Bud sagebrush	T
	Fourwing saltbush - *Atriplex canescens*	T
	Shadscale	T
Little Rabbitbrush	Indian ricegrass	2
	Galleta	T
	Western wheatgrass	T
	Alkali sacaton	T
	Saltgrass	T
	Globemallow	3
	Halogeton	2
	Annuals	T
	Little rabbitbrush	77
	White sage	11
	Rubber rabbitbrush	1
	Nuttall saltbush	1
	Big sagebrush	T
	Bud sagebrush	T
	Spiny hopsage	T
	Shadscale	T
Big Sagebrush	Galleta	T
	Indian ricegrass	T
	Squirreltail	T
	Great Basin wildrye	T
	Halogeton	1
	Globemallow	T
	Annuals	T
	Big sagebrush	65
	White sage	13

	Shadscale	6
	Little rabbitbrush	6
	Fourwing saltbush	2
	Greasewood	1
	Rubber rabbitbrush	1
	Nuttall saltbush	1
	Black sagebrush	1
Greasewood	Alkali sacaton	1
	Galleta	1
	Saltgrass	1
	Indian ricegrass	T
	Halogeton	1
	Globemallow	T
	Summer cypress	T
	Annuals	T
	Greasewood	75
	Rubber rabbitbrush	8
	Shadscale	7
	Little rabbitbrush	2
	Fourwing saltbush	1
	Nuttall saltbush	T
	Big sagebrush	T
Nuttal Saltbush	Halogeton	1
	Nuttall saltbush	78
	White sage	8
	Big sagebrush	13
Rubber Rabbitbrush	Poverty weed	10
	Rubber rabbitbrush	89
	Greasewood	1
	Shadscale	T

*T: Trace, less than 1 percent.

Source: Shoshone/Eureka Resource Area Range Survey Information, 1963.

valley. These associations, now dominated by little rabbitbrush at 77% of the composition, occupy sites that were probably shadscale/bud sagebrush or shadscale/white sage associations.

The big sagebrush association is located along the benchland on the west side of the valley. Big sagebrush dominates the site comprising approximately 65% of the composition.

The greasewood association occupies the area surrounding the Fish Creek Ranch headquarters. Greasewood comprises approximately 75% of the plant composition.

The nuttall saltbush association occupies sites along the main drainage through the valley bottom. Few plant species are associated with this type. Understory is virtually non-existant except for halogeton in the disturbed areas.

The rubber rabbitbrush association is small, covering less than 1% of the valley. It is located in the valley floor near the Fish Creek Ranch.

Duckwater Trail

Little Smoky Valley

The area known as the Duckwater Trail is composed of two major types of vegetation: the woodland type, which consists of pinyon-juniper and makes up 31% of the area; and the shrub type, which includes shadscale, sagebrush, rabbitbrush, white sage, and budsage, comprising 67% of the area. The remaining 2% is of the annual forb type, consisting almost exclusively of halogeton. There is virtually no aquatic or riparian vegetation in the area under consideration, as the only sources of water are wells or reservoirs.

There are no known threatened or endangered plant species in the areas according to "A Report on Threatened or Endangered Plant Species of Lander/Eureka/Nye Counties", by A. Holmgren, et. al., Utah State University, 1977.

Range Condition and Trend

The following discussion analyzes eleven trend plots located in the Fish Creek Ranch Allotment. These plots were established in 1969 when pictures were taken but plots were not read. All data for 1969 was estimated from individual plot photos (See Appendix 6, Map A). Plot photos are available at the Shoshone/Eureka Resource Area Office, Battle Mountain District.

Plot #1

This plot is located in big sagebrush association about .25 miles from Bradford Spring in Antelope Valley. Trend is up slightly. This is due to a slight increase in basal area of the single squirreltail plant located in the plot and a little more litter being recorded in 1979 than in 1976. Variation may be attributed to different individual estimations. Analysis of trend photos shows little or no change in the plot or the overview photo.

Plot #2

Plot #2 is also in the big sagebrush association near Bradford Spring. Table 2-5 shows a 25 point decrease in the trend index between 1976 and 1979. This is due to different amounts of litter recorded and is not representative of the actual trend. The overview photos show no change in the vicinity of the plot.

Plot #3

Plot #3 is located in a white sage flat .5 miles north of the Andrus Well in Antelope Valley. Though Table 1 shows a loss of only five white sage plants between 1969-1979, an analysis of trend photos shows that in 1976 and 1977 there was a great reduction in both cover and total plants. The latest photo shows some increases in plant vigor, but is still clearly less vigorous than in 1969.

TABLE 2-5

Range Trend Index With 1976 as Base Year

		1976	1979	Trend Index
Plot #1	Reading	21.71	23.46	
	Index	100	108.06	Up
Plot #2	Reading	27.40	20.51	
	Index	100	74.85	Down
Plot #3	Reading	105.36	102.56	
	Index	100	97.34	Down
Plot #4	Reading	50.24	75.19	
	Index	100	149.6	Up
Plot #5	Reading	99.33	97.83	
	Index	100	98.49	Down
Plot #6	Reading	109.41	103.78	
	Index	100	94.85	Down
Plot #7	Reading	86.21	103.5	
	Index	100	120.06	Up
Plot #8	Reading	94.86	119.04	
	Index	100	125.49	Up
Plot #9	Reading	6.53	29.54	
	Index	100	299.23	Up
Plot #10	Reading	9.78	3.36	
	Index	100	34.36	Down
Plot #11	Reading	.56	1.19	
	Index	100	212.5	Up

Source: Shoshone/Eureka Resource Area Range Studies, 1979.

Plot #4

Also, .5 miles north of Andrus Well, plot #4 is in a white sage flat. Table 2-6 shows a white sage reduction of eight plants between 1969 and 1979, but vigor was greatly reduced in 1976 from 1969. Table 2-5 shows trend is up by 50 points in 1979 from 1976, but the 1969 photos show the plot was much more vigorous and contained many healthy bud sagebrush plants and white sage plants that have disappeared in later photos.

Plot #5

This plot is located .45 miles southeast of 3C Well along Fenstermaker Wash. Table 2-5 shows a slight decline in trend from 1976 to 1979, but examination of the photos shows the 1969 and the 1978 photos are nearly equal with respect to white sage. More halogeton is evident in the 1969 photo.

Plot #6

This plot is located .7 miles southeast of 3C Well in a white sage flat. Table 2-5 shows trend down only slightly in the period between 1976 and 1979, but Table 2-6 shows a loss of eight white sage plants in the same period with a loss of eleven between 1969 and 1979.

Plot #7

This plot is located one mile northeast of Eightmile Well in a white sage flat. The trend index in Table 2-5 indicates an improvement in Plot #7 over the past three years. Data indicates that in 1979 there is a greater composition of white sage and also greater percentage of live plant cover in 1979 than was present in 1976. The overview photos show a gradual increase in vigor also. Table 2-6 supports this with an increase in total white sage plants over the past ten years.

TABLE 2-6

*Number of Individual Plants Per Plot by Species

Plot #		** 1969	1976		1979		69-79
Plot #1	Sihy	1	1		1		0
	Artr	1	1		1		0
Plot #2	Artr	4	5		5		+ 1
	Hagl	-	-	31	-		0
Plot #3	Sihy	-	1	1	1		+ 1
	Cela	22	15	6	17	1	- 5
	Hagl	-	25	9	-		0
Plot #4	Eual	20	7	19	12		- 8
	Arsp	8	4		-	38	- 8
	Hagl	-	69	1	5		+ 5
	Orhy	-	1		1		+ 1
	Sihy	-	1		-		0
Plot #5	Cela	18	22		19		+ 1
	Hagl	30	11		19		- 11
Plot #6	Cela	21	18		10		- 11
	Hagl	6	6		1		- 5
Plot #7	Cela	14	19	17	23	1	+ 9
	Hagl	18	45		37		+ 19
Plot #8	Cela	25	27		27		+ 2
	Hagl	11	67	42	11		0
	Orhy	-	-		2		+ 2
Plot #9	Cela	22	2		1		- 21
	Hagl	32	39		316		+284
	Uniden. Grass	1	-		-		- 1
Plot #10	Cela	27	-		-		- 27
	Hagl	11	14		77		+ 66
	Orhy	-	-		1		+ 1
	Arno	1	-		15		+ 14
Plot #11	Hagl	-	3		16		+ 16

*Underlined Numbers denotes seedlings; others denotes mature plants.

**1969 numbers counted from photographs; 1976 and 1979 numbers are actual data taken from the plots.

Source: Shoshone/Eureka Resource Area Range Studies, 1979.

Plot #8

This plot is located one mile northeast of Eightmile Well in a white sage flat. Almost identical to Plot #7, Plot #8 has an improving trend index shown in Table 2-5, and a slight increase in white sage numbers. The overview photos show increased vigor of the white sage stand over previous years.

Plot #9

This plot is located two and one half miles north of Fish Creek Springs. The white sage flats in this area show a substantial downward trend since 1969. The photo from 1969 shows 22 individual white sage plants of which all but two disappeared between 1969 and 1976. One more of the two remaining white sage plants was gone before 1979, and halogeton increased 710% over the three year period. The one remaining white sage plant was larger in 1979 which caused the great increase in the trend index shown on Table 2-5, but as is clear from the other data, the trend is declining.

Plot #10

This plot is located in a white sage flat two and one half miles north of Fish Creek Springs. Like Plot #9, trend is down. Table 2-6 shows a 100% loss of white sage since 1969 and a gradual increase of halogeton. This is indicative of the surrounding area, as is shown in overview trend photos of Plot #10.

Plot #11

This plot is located on the north end of Fish Creek Valley about three miles south of where the Fish Creek Ranch road turns off Highway 20. Surrounding vegetation is shadscale and nuttall saltbush. The plot is composed strictly of halogeton which increased from 1976 to 1979. Halogeton litter increased, so the trend index from Table 2-5 also increased. This is not a true representation of trend.

Comparison of the 1969 photo estimates to the 1979 plot readings indicates considerable change in vegetation composition. In the eight plots containing white sage there was a loss of 68 individual plants. This represents an overall loss of 40% of the white sage located within the original 1969 plots. In the six plots containing grass species there was an increase of four individual grass plants. In the two plots containing big sagebrush there was an increase of one individual plant. Only one plot contained bud sagebrush. Data indicates that in a ten year period all eight mature bud sagebrush plants have died out. One plot contains black sagebrush which shows an increase of 14 mature plants since 1969. Ten of the eleven plots contain halogeton in 1979. Six of the plots contained halogeton in 1969. Overall there was an increase of 374 individual halogeton plants in a ten year period. This represents an increase of 346%.

Overall analysis of the trend plots indicates that the white sage associations are in a steady downward trend and the big sagebrush associations are stable to slightly downward in trend. There are no established trend plots in any of the other associations but using increaser species as an indicator, the meadow associations are also in a downward trend. The abundance of iris is the indicator in this case. The abundance and apparent increase in little rabbitbrush composition within the shadscale association would indicate an apparent downward trend. This may be the successional stage that the present little rabbitbrush associations went through in the past. The lack of reproduction in aspen stands in the lower elevations indicates an apparent downward trend. The lack of understory vegetation in these stands is supportive of this downward trend. Aspen associations away from creek bottoms along high ridge lines and snow pocket areas show signs of vigorous reproduction and have a sufficient understory of diversified species to indicate apparent stable or upward trend.

E. Wildlife

Wildlife species present within the Fish Creek Ranch Allotment and the Duckwater Trail include:

Mammals

Long-Tailed Weasel - Mustela frenata
Badger - Taxider taxus
Coyote - Canis latrans
Kit fox - Vulpes macrotis
Mountain Lion - Felis concolor
Bobcat - Lynx rufus

**Mule Deer - Odocoileus heminous
**Pronghorn - Antilocapra americana

**Black-Tailed Jackrabbit - Lepus californucus
Nuttail Cottontail - Sylvilagus nuttalii
Pygmy Cottontail - Sylvilagus idahoensis
Desert Cottontail - Sylvilagus auduboni

Antelope Ground Squirrel - Ammospermophilus leucurus
Golden Mantled Ground Squirrel - Citellus lateralis
Desert Woodrat - Neotoma lepida
Bushy-Tailed Woodrat - Neotoma cinerea
Ords Kangaroo Rat - Dipodomys ordi
Desert Kangaroo Rat - Dipodomys deserti
Great Basin Kangaroo Rat - Dipodomys microps
Least Chipmonk - Eutamias minimus
Valley Poket Gopher - Thomomys bottae
Deer Mouse - Peromyscus mankulatus
Pinyon Mouse - Peromyscus truei
Canyon Mouse - Peromyscus crinstus
Western Harvest Mouse - Resthrodontomys megalotis
Great Basin Pocket Mouse - Perognathus parvus
Long-Tailed Pocket Mouse - Perognathus formosus
Voles - Microtus sp.

Major species of reptiles include:

Great Basin Rattlesnake
Great Basin Gopher Snake
Garter Snake
Great Basin Fence Lizard
Northern Desert Horned Lizard
Northern Sagebrush Lizard
Great Basin Whiptail Lizard

Birds

Turkey Vulture - *Cathartes aura*
Red-tailed Hawk - *Buteo jamaicensis*
Swainson's Hawk - *Buteo swainsoni*
Rough-legged Hawk - *Buteolagopus*
Ferruginous Hawk - *Buteo regalis*
Golden Eagle - *Aguila chrysaetos*
Sharp-shinned Hawk- *Accipiter striatus*
Coopers Hawk - *Accipter cooperii*
Gosbawk - *Accipitergentilis*
Prairie Falcon - *Faloc mexicanus*
Sm Kestrel - *Falco sparverius*
Merlin - *Falco columbarius*
Marsh Hawk - *Circuscyaneus*
Great Horned Owl - *Bubo virginianus*
Burrowing Owl - *Speotyto cunicularia*
Short-eared Owl - *Asio flammeus*
Long-eared Owl - *Asio otus*

Hungarian Partridge-*Perdix perdix*
Chucker - *Alectoris graeca*
California Quail - *Lophoryx californicus*
**Sage Grouse - *Centrocercus urophasianus*

Morning Dove - *Zenaidura macrouva*

Hummingbirds sp. -
Woodpeckers sp. -
Flycatchers sp. -

Sage Thrasher - *Oreoscoptes montanus*
Loggerhead Shrike - *Lanis ludovicianus*
Pinyon Jay - *Gymnorhinus cyanocephalus*
Common Crow - *Corvus brachyrhynchas*
Common Raven - *Corvus corax*
Wren sp. -
Warblers sp. -

Horned Lark - *Eremophila alpestris*
Mt. Bluebird - *Sialia currucoides*
Mtn. Chickadee - *Parus gambeli*

Rufous-sided Towhee-*Pipilo* erythrophtahalmus
Green-tailed Towhee-*Pipilo chlorura*
**Sage Sparrow - *Amphispiza belli*
Brewer's Sparrow - *Spizella breweri*
Sparrous sp. -

*This list is incomplete but covers major groups.

**Species likely to be greatly effected by any or all of the planned actions.

Source: Nevada Department of Wildlife, 1979.

F. Wild Horses

Wild horses in the Fish Creek Ranch Allotment are part of the Fish Creek Herd Management Area (HMA). The HMA includes the Lucky C, Arambel, and Fish Creek Ranch allotments and northern portions of the Duckwater Trail. An aerial inventory of the HMA, during October 1979, counted 796 wild horses; the recommended interim management level is 165 head. A count of the southern portion of the Duckwater Trail during the same time showed 65 wild horses, which appears to be an acceptable number.

Movement of the horses seems to be related to climate and availability of feed and water. Normally the horses occupy higher elevations during summer and the white sage flats during winter when snow prevents use of the high country. Spring and fall use depends on snow cover, forage and water availability. In late summer and fall, when many watering places dry up, the horses congregate fairly close to available water. There is a high degree of similarity, especially during some seasons, between wild horse and cattle diets (Ely BLM, Fecal Analysis, 1975).

The Nevada Department of Wildlife has documented severe competition between wild horses, cattle and deer.

G. Human Interest Values

1. Visual and Wilderness Characteristics

It is not anticipated that there will be any effect on visual resources or wilderness considerations with either the proposed action or alternatives.

2. Cultural Resources

Cultural Resources in the Fish Creek Allotment consist of archaeologic and historic sites. As elsewhere in the Great Basin, prehistoric sites are usually noted by scatters of stone chips and associated tools. Mostly indicative of subsistence or food gathering activities, these sites represent part of a large pattern. During the ethnographic period Indian populations relied upon a hunting and gathering life style. Individual families or small groups followed a strict schedule of food collection as seasonally specific plants ripened. Hunting, or course, augmented the basic diet. The antiquity of this subsistence strategy is unknown. If the above pattern holds for the Fish Creek Ranch Allotment, then multiple small collection sites would be expected in those areas which produced plant foods. These stations further should be associated with base camps, possibly around seasonal or perennial waters.

Historic sites in the allotment consist of remnants of ranching and mining activities. Ranches probably began in Fish Creek Valley and Little Smoky Valley after 1870. Prior to this time there was not sufficient people in Eureka to generate a market for ranch products. Both federal and state legislation after 1880 encouraged ranch settlement and development. Several of the abandoned ranches in the allotment may date from this period.

The mining industry played an important role in developing this part of Nevada. Although the area around Eureka was the primary mineral producer, miscellaneous prospecting camps were located in surrounding mountainous areas. Mining production in Eureka was noteworthy because of the use of charcoal during smelting. Many charcoal camps are located in the pinyon and juniper forested mountains in the area.

H. Livestock Grazing

1. Fish Creek Ranch Allotment

General Information

This large cow/calf operation was purchased by the Nevada Cattle Company from Burke and Yvonne Petersen in June, 1978. The Nevada Cattle Company's grazing preference includes use in the Ely District and in both resource areas of the Battle Mountain District. All grazing privileges were adjudicated although no period of use was established. Present recognized grazing privileges are as follows:

Licensed by Shoshone/Eureka R.A. (N-6)

Allotment	Active (AUMs)	Suspended Non-Use (AUMs)	Total (AUMs)
Fish Creek Allotment	18,914	13,086	32,000
Willow Creek Allotment	5,370	0	5,370
Duckwater	3,526	2,348	5,874
Pancake	609	0	609
Sand Springs	708	0	708
Nyala	545	265	810
Licensed By Tonopah R.A. (N-6)			
Sand Springs	3,210	0	3,210
Crater Black Rock	5,180	2,443	7,623
Morey	2,250	0	2,250
Hot Creek	8,850	0	8,850
Licensed By Ely District (N-4)			
Cold Creek Allotment	9,129	0	9,129

Source: Battle Mountain and Ely District's Grazing Files, 1979.

The grazing preference involved with this assessment are in the Fish Creek, Duckwater, and Pancake allotments.

Private lands used in conjunction with the public lands within the three allotments are: Fish Creek Ranch, Willow Creek Ranch, Willow Ranch, Bartine Ranch, Kitchen Meadows, Ardens Ranch, Schafer Ranch and the Indian Creek Ranch (See Appendix 1, Map A).

The past normal operation within the three allotments was as follows:

1. April 1, approximately 1,500 cattle moved from Sand Spring into the Duckwater Trail.
2. April 16, approximately 1,500 cattle moved from the Duckwater trail into Fish Creek Valley.
3. April 20, approximately 1,500 cattle moved from Sand Springs to the Duckwater Trail.
4. April 28, approximately 400 cattle moved from Sand Springs to the Duckwater Trail.
5. May 6, 1,500 cattle moved from the Duckwater Trail into Fish Creek Valley.
6. May 13, 400 cattle move from the Duckwater Trail into Fish Creek Valley.
7. Early May, approximately 800 cattle moved into Antelope Valley from Fish Creek Valley.
8. May 16, approximately 1,600 cattle moved out of Fish Creek Valley to Cold Creek. Approximately 200 of them go into the Schafer Ranch area.
9. Mid-June, approximately 640 cattle move out of Antelope Valley into the Willow Ranch Allotment. Approximately 600 cattle move out of Antelope Valley into the Forest.

10. Early July, drift cattle out of Fish Creek Valley and Antelope Valley to the Antelope Range and Fish Creek Range.

11. Mid-October, 600 cattle move from the Forest into Antelope Valley.

12. Late October, 640 cattle move into Antelope Valley from the north end of the Forest and Willow Ranch Allotment.

13. Mid-November, approximately 1,000 cattle move from Fish Creek Valley to the Duckwater Trail.

14. November 30, approximately 1,000 cattle move from the Duckwater Trail into Sand Springs.

15. December 1, approximately 800 cattle move from Fish Creek to the Duckwater Trail.

16. December 15, approximately 800 cattle move from the Duckwater Trail into Sand Springs.

17. December 20, approximately 1,600 cattle move into Fish Creek from Cold Creek.

18. December 31, approximately 1,600 cattle move from Fish Creek onto the Duckwater Trail.

19. January 15, approximately 1,600 cattle move from the Duckwater Trail into Sand Springs.

The above described operation gives an overall view of cattle movement. Dates and numbers are approximate since unforseen circumstances cause annual variations.

Overall, the Nevada Cattle Company operation is dependent upon the grazing of public lands 12 months of the year. At no time are all the cattle removed from public land. Base properties and other private lands owned by Nevada Cattle Company are used to pasture and work livestock during the spring and again in the fall.

2. Duckwater Trail

Nevada Cattle Company is the only permittee presently using the Duckwater Trail area. This operation uses the Duckwater Trail in the fall, to trail a maximum of 4,500 head south from the Fish Creek Ranch to winter in the Tonopah Resource Area, and then again in the spring to trail the same number back north to Fish Creek Ranch.

The entire operation depends to a certain extent on the use of the Duckwater Trail to move between winter and early spring range to summer range.

I. Social-Economic Condition

No information available at this time.

III. ENVIRONMENTAL CONSEQUENCES

Fish Creek Ranch Allotment

A. Proposed Action

1. Anticipated Impacts

Anticipated impacts of establishing a period-of-use in the Fish Creek Ranch Allotment are both beneficial and partially detrimental to the vegetation on the summer range. To graze the Antelope Range beginning June 16, the existing poison drift fence will have to be maintained. This will exclude most of the poison larkspur areas from early grazing, but some loss of livestock is to be expected. With proper use of the drift fence, cattle will be held out of the higher elevations. This will allow for complete rest of the vegetation through the critical growth period and will allow for seed production. This would provide for all the plant's physiological requirements allowing them to restore carbohydrate reserves and develop more extensive root systems. Overall plant vigor would increase. Late summer grazing after seed ripe will allow for shattering and trampling of seed. This, together with adequate precipitation and other favorable climatic conditions, would increase seedling establishment.

Delaying the grazing of the Fish Creek Range from the first of May, as in the past, to mid-June will allow for needed rest of vegetation through most of the critical growth period. Again, the vegetation would respond with increased vigor while producing more forage. Individual plants will have time to replenish carbohydrate reserves and develop more extensive root systems. The vegetation may not have sufficient time to produce mature seeds. This, on a short term basis, will provide for increased vigor and forage production but, in the long term, may not provide for seedling establishment to maintain or increase the vegetation composition.

Anticipated impacts of grazing the Antelope Range below the poison fence are much the same as those for the Fish Creek Range. The vegetation will be rested through most of the critical growth period but may not have sufficient time to produce mature seeds. Plant vigor will increase but seedlings may not be established.

Continued grazing of the same area during the early summer may cause the decline or final loss of high quality forage plants. Especially if these quality plants do not have sufficient reproduction to maintain their present density.

The complete or near complete removal of all grazing livestock from the summer range by September 16 will be beneficial to all the vegetation especially if plants are not grazed during periods of fall green-up. Vegetation that has been previously grazed is easily damaged if grazed during the fall growth period. During this period most of the plant's food reserves are expended to produce new green vegetation. If this vegetative growth is removed, the plant is unable to produce new food reserves to replenish its stores. This leaves the individual plant in a weakened condition creating greater stress when the plant begins growth the following spring.

Anticipated impacts are beneficial to vegetation on the spring/fall range. Complete rest through the growing season will allow both grass and browse species to regain plant vigor. Increased vigor means greater forage production and increased seed production. Fall grazing will allow for seed shattering and trampling. With increased vigor and seed production, reproduction of quality vegetation would increase. Increased vigor means more vegetative biomass. More vegetative biomass means more litter and more vegetative ground cover. Watershed condition should also improve.

All of the above anticipated impacts are relative to the control of grazing by cattle and wild horses. Benefits short term or long term, will not be as great if livestock are not properly managed or if horse numbers are not reduced to a manageable level.

Establishing the period-of-use of April 16 to June 15 for the base property requirement will insure complete rest of all vegetation on both the spring/fall range and summer range through the critical growth period. Actual benefits, such as increased vigor and total forage production are discussed above.

Requiring regular non-use of approximately 17,000 AUMs within the Fish Creek, Willow Ranch, Pancake, and Duckwater allotments each year will insure that both the summer and spring/fall ranges will not be overstocked. This will eliminate the overutilization of existing vegetation. Without the proper stocking level, plant vigor would continue to decline. Total forage production from existing plants would remain low. Overall range condition would continue to deteriorate, possibly at an accelerated rate.

Removal of most of the present numbers of wild horses would complete the management of the grazing livestock. Removal would allow for almost complete rest for the existing vegetation through the critical growth period. Little benefits would be derived if uncontrolled horse numbers are allowed to graze the vegetation throughout the growing season as well as compounding the grazing pressure on these species throughout the summer and fall.

With the removal of both cattle and horses through the critical growth period, improved plant vigor would be insured. Existing vegetation will readily compete with increaser and invader species for soil moisture and nutrients.

The proposed action will adversely affect the Nevada Cattle Company in the short term. In order to hold all the cattle on the base property from mid April to mid June, the outfit will have to either buy additional feed or will have to develop more hay and pasture land. This may mean the renovation of many of their small private land holdings such as, the Willow Creek Ranch, Indian Creek Ranch, Ardens Ranch, Schafer Ranch, Bartine Ranch, Kitchen Meadows and Willow Ranch. More labor will be required to feed the livestock. Livestock held in close quarters are more susceptible to communicable diseases. This may increase veterinary costs and cause additional loss of livestock. Grazing use beginning June 16 in the Antelope Range may cause an increased loss of livestock to larkspur poisoning. This could be held to a minimum by maintaining the existing poison drift fence.

Overall benefits to the livestock operation may outweigh the short term impacts. The livestock should be in top condition after being fed or pastured on the private lands for two months. During this time, the conception rate should increase as cows will be in good condition and in close contact with bulls. Overall calf crop should increase. When range condition improves, more vegetation will be available for livestock use. Thus Weaning Weights should increase, bringing more return to the permittee. All improvements made to the private land should appreciate the value of the overall operation.

The proposed removal of 650 wild horses in the Fish Creek Ranch Allotment would help improve range condition. Overall productivity and condition of the horses would improve as competition for available vegetation decreased.

This increased plant vigor will allow for a greater diversity of non-game species as well as game species. Rodents and small non-game birds and the predators which feed on these species will exhibit the largest benefits. Pronghorn found in the area will benefit due to increased vegetation availability. Small game species such as the pygmy and desert cottontail should also benefit from this increase in available plant food.

There are no anticipated negative impacts for the removal of cattle from the White Sage Flats within the Fish Creek Allotment.

Negative impacts will occur if overutilization is allowed to occur in the areas above 6,000 feet. The Nevada Department of Wildlife estimates that 1,200+ deer utilize this area as winter range. If cattle removed from the flats are placed in this high country extreme caution should be used to prevent overutilization.

It is difficult to project the amount of damage cultural resources will experience from implementing the proposed action since so little inventory has been completed in the Allotment (See Appendix 7, Tables 1 and 2). To this date, only 63.6 acres or 0.02% have been surveyed for cultural resources within the 288,000 acre area. The small number of archaeology sites noted in Table 1 indicates the lack of inventory data. Some of the types of sites expected for the region, however, are briefly described above. Each of the historic sites was recorded by a recreation crew in 1977 and no formal cultural resources report has been prepared.

Cattle trampling is the main negative impact associated with the proposed action. Grazing and trampling has several adverse effects upon cultural resources. Artifact breakage and damage is probably the most obvious. This is a problem since archaeologists are increasingly using edge damage and micro-wear studies in analyzing site materials. Damage incurred through trampling would create biases in such studies.

The important aspect of artifact context is also influenced through the presence of cattle at a cultural resource site. Since archaeological sites are created as a result of certain prehistoric activities or set of activities, the spatial relationships between artifacts (their context) can be used as evidence to infer the nature of these activities. Trampling would tend to "homogenize" any sites creating a uniform spread of artifacts. Such contextual smearing would furthermore have the effect of masking sites by burying artifacts.

Finally, it must be recognized that anticipated disturbances will be site-specific. Cattle can be expected to localize around water sources, such as springs. Water bearing areas in the Great Basin contain a very high probability for holding prehistoric material.

Initiating a period-of-use for the Fish Creek Allotment will not substantially alter the degree of cattle use for mountainous areas. These areas are currently used as summer range by ranch operators and will continue to be used as such under the proposed action. The rate at which cultural resources are deteriorating in the mountain ranges will not be appreciably altered. The main difference between current operations and the proposed action involves the amount of cattle use on valley floors and table bench lands. Since this use will be decreased, cultural resources will be positively affected in these areas.

2. Mitigating Measures

One adverse impact of the proposed action is the possible loss of quality vegetation in the Fish Creek Range and lower elevations of the Antelope Range. Loss of these plants would be due to lack of reproduction. To mitigate this impact would require a grazing system that would provide rest from grazing until after seed ripe. This would require extensive fencing and a detailed rotation grazing system.

3. Unavoidable Impacts

The additional expenses of labor and feed to hold the livestock on base property can only be avoided by the "No Action" alternative.

4. Short and Long Term Effects on Productivity

A declaration in the downward trend in range condition will be evident. Existing stands of white sage will respond rapidly to spring and summer rest. Overall, vegetation would make a noticeable response in increased vigor and increased forage production.

The permittee will be faced with the additional expense of buying or producing extra feed, possible extra veterinary expenses and additional labor expenses.

Long term effects will be increased forage production, possible regeneration of remnant white sage stands, an overall improvement in ground cover, watershed condition and range condition. The permittee will have heavier Weaning Weights on calves, a possible increase in calf crop and increased value of private lands.

The improvement in wild horse herd productivity and health of the horses would be a short and long term effect of the proposed action.

5. Irreversible and/or Irretrievable Commitments of Resources

All fuel and work-months expended in the wild horse removal and livestock management are irretrievable. There are no irreversible commitments of resources.

B. No Action Alternative

1. Anticipated Impacts

Anticipated impacts are adverse in respect to vegetative condition, overall range condition and watershed condition. Without any change in livestock and wild horse management, range condition will continue to deteriorate at an accelerated rate (See Section II, D.). Quality vegetation will be lost and potential to regain a productive vegetative stand will also be lost.

A no action alternative would not affect the permittee on the short term basis. In the long run, the permittee's livestock will continue to have a low percentage calf crop. As the range condition continues to deteriorate, the calf crop, as well as Weaning Weights will continue to decrease. Loss of mature livestock may increase as cow condition continues to be poor.

Wild horse numbers would continue to increase and competition with other ungulates would also increase. As range condition decreased, horse productivity and health would also decrease. At some point in the long term a severe winter could cause the death of many horses.

If deterioration of the white sage continues; loss of wildlife forage is inevitable. This loss will eventually result in a reduction in pronghorn and other wildlife numbers.

2. Mitigating Measures

The establishment of a proper period-of-use would help to mitigate most of the adverse impacts. This combined with management of wild horse levels and a well designed rest rotation grazing system would mitigate present adverse impacts.

Without management of the wild horse herd, cattle will have to be removed as horse numbers increase so that the vegetation will not be overutilized.

3. Unavoidable Impacts

There are no unavoidable impacts that can not be mitigated if a proper period-of-use was established, if horse numbers were managed and, if a well designed rest rotation grazing system were implemented. However, without these measures a possible total loss of white sage as a wildlife forage and subsequent reduction in wildlife numbers will result.

4. Short and Long Term Effects on Productivity

Short term and long term impacts to the vegetation will be detrimental. The downward trend in range condition will continue, possibly at an accelerated rate. Continued loss of soil and high quality vegetation may reach the point where potential for improvement might be lost.

Short term effects on the permittee will be minimal. The operation would continue to produce a low calf crop. Weaning Weights will remain about the same as in the past.

Productivity and health of wild horses would remain the same in the short term, but would decline in the long term.

If the present situation is allowed to continue unchecked, a loss of wildlife forage and reduction in numbers will result.

5. Irreversible and/or Irretrievable Commitment of Resources

If the present impacts are allowed to continue, a point of no return may be reached. Areas that in the past were white sage and are presently halogeton may never return to the natural condition.

C. Seeding Alternative

1. Anticipated Impacts

A separate site specific EA including a cultural resource clearance will need to be prepared prior to seeding establishment.

Actual benefits to the livestock operation would be two fold. First, the seedings will provide early green feed. Livestock will be able to maintain or improve their body conditions. The seedings will be fenced so many of the same benefits as to calf gain and calf crop increase mentioned in the proposed action may be attained. Secondly, by using the seedings during the early spring, it may not be necessary to move all livestock to the base property during the two month spring period.

The native vegetation will benefit from the removal of livestock grazing during the critical growth period. Actual benefits to the spring/fall range will be much the same as those discussed in the proposed action. The summer range will benefit by either a reduction in livestock number or from a deferred grazing date.

There will be a loss of big sagebrush in the seeding areas and definite change in vegetative type, leaving a distinct visual intrusion.

The effects of seedings on wildlife cannot be effectively analyzed at this time but generally, mono-cultures tend to have negative effects on wildlife populations. Although seedings provide needed early green feed for wintering deer.

2. Mitigating Measures

Mitigating measures will need to be analyzed when the EA for seedings is developed. Possibly, the use of mixed grass and seedings will be to the benefit of livestock and wildlife.

3. Unavoidable Impacts

Unavoidable impacts are the anticipated loss of 2,000-3,000 acres of varied wildlife habitat, the resultant visual intrusion caused by the seedings, and the cost of the seedings themselves.

4. Short and Long Term Effects on Production

A successful seeding will greatly increase vegetation production in both the short and long term. With the increase in vegetation production, cattle conditions will improve with an increase in red meat production. The seedings will also take grazing pressure off of the native range which will increase the native production over time. Wildlife numbers may decrease until the seedings become established. A mixed grass and forb seeding will benefit wildlife over time.

5. Irreversible and/or Irretrievable Commitments of Resources

The removal of big sagebrush within the seeding area and the actual seeding of introduced species will create an irreversible commitment of resources. Although, over a very long period of time, the area may return to a big sagebrush/grass type. Data gathered in the Hill Camp Allotment, Lakeview District, indicates that certain sites will return to native brush even under intensive management.

D. Permittee's Alternative

1. Anticipated Impacts

This alternative is similar to the proposed action in many respects (See Appendix 3). It will provide rest through most of the critical growth period in both areas of the summer range. Thus, anticipated impacts are the same as those described in the proposed action. Variation to the proposed action is the removal of livestock by October 15, one month later than the proposed action. Depending on climatic conditions, this may allow livestock to utilize fall growth of forage plants. This could impact vegetation by depleting root reserves and leaving individual plants in poor vigor.

This alternative will provide for needed rest from cattle grazing (except for trail use) in the south portion of Fish Creek Valley and all of Antelope Valley. Anticipated impacts will be an increase in overall plant vigor, providing an increase in total forage production. Of course, a response such as this is dependent upon favorable climatic conditions as well as management of the wild horse numbers.

The north portion of Fish Creek Valley will be grazed during the period from May 10 to June 9 and again from October 1 to October 15. The majority of the vegetation in this area is white sage. Spring utilization of white sage is detrimental to its overall vigor as discussed in the proposed action.

Overall, this alternative will provide less grazing pressure than the proposed action. The total active use required in this alternative (derived from the cattle flow chart) is approximately 9,700 AUMs in the Pancake, Fish Creek, Willow Ranch, and Duckwater allotments. This includes trail use necessary in subsequent moves of livestock to and from the forest service allotments, the Willow Ranch Allotment and the Cold Creek Allotment. This alternative will provide approximately 18,700 AUMs of regular non-use in the Fish Creek, Willow Ranch, Pancake, and Duckwater allotments each year.

Anticipated impacts to the Nevada Cattle Company operation are increases in labor costs derived from additional cattle movement and an increase in number of cowboys needed to make the moves on time as required by the alternative.

2. Mitigating Measures

Possible mitigating measures include a detailed AMP requiring extensive range improvements such as division of the allotments into pastures and seedings to relieve grazing pressure on the native range, primarily during the spring and early summer.

3. Unavoidable Impacts

Unavoidable impacts would be additional expense of labor to make timely moves and as many moves as required in the alternative.

4. Short and Long Term Effects on Productivity

Short term effects on the vegetation will be similar to those discussed under the proposed action. The permittee will be faced with the additional expense brought about through the increase in labor force.

Long term effects are similar to those discussed under the proposed action alternative.

5. Irreversible and/or Irretrievable Commitments of Resources

There are no irreversible or irretrievable commitments of resources.

Duckwater Trail

A. Proposed Action

The proposed action is to use an alternate route to trail livestock south in the fall and north in the spring. The proposed trail is west of the existing trail and located for the most part high on the benches (See Appendix 4, Map A).

Also, part of the proposed action is to establish specific fenced holding pens to feed, water and contain the livestock each night. Pens would be a maximum of 40 acres in size, and livestock would be required to move from one pen to the other in one day's time (See Appendix 4, Map A).

1. Anticipated Impacts

Use of the proposed trail will allow the white sage flats along the existing trail to recover to a certain extent, depending on the length of time the proposed action is in effect. Trailing over the same route twice a year for a number of years will result in some deterioration of the range condition along the proposed trail. The first day's trail from the ranch to 8-mile Seeding is to go along the road across shadscale, rabbitbrush, and white sage before reaching the sagebrush bench. This area is already showing signs of deterioration and will be negatively effected by the proposed trail use.

The area within the holding pens will be denuded of vegetation due to trampling by livestock. The permittees intend to move three seperate herds of at least 1,000 head each. This would mean that each pen would hold 1,000 head for a total of six days per year. These holding pens would facilitate movement of cattle by eliminating night drift, thus, shortening the length of time needed to regather and begin trailing the animals.

Trailing along the benches of the Little Smoky Valley will have little impact upon wildlife if completed as stipulated. If cattle movement in restricted as much as possible to the road, drift is contained and the cattle are rested in designated areas as much as possible, impact on wildlife will be negligible. The 40 acre holding pens will be total losses to wildlife but because of their size, the losses are considered minimal.

This action, while reducing cattle travel along valley bottom land, will cause additional impacts for the benchlands because of relocating cattle movement. Cultural resources will be adversely affected by this proposal. The degree of disturbance, however, will be minimalized by establishing 40 acre holding pens for the cattle while enroute. Although this will tend to concentrate disturbances, the extent of negative impact can be better controlled.

2. Mitigating Measures

Negative impact on the vegetation along the trail could be held to a minimum by containing the cattle as much as possible to the road and moving as quickly as possible, thereby limiting the amount of drift.

Some of the pressure on the trail from Fish Creek Ranch to the 8-mile seeding could be relieved by trailing west along the road by the ranch and then cutting straight south to the seeding (Appendix 4, Map A). Spring and fall use could be alternated yearly between these two routes.

Each 40 acre parcel as well as a buffer area should, of course, be examined for cultural resources prior to project implementation.

Pressure can be lessened on pen areas if there are enough to alternate use over the years.

If no pens were built the cattle could be fed and watered at different points along the trail. This would eliminate the complete loss of vegetation within the holding pens.

To minimize harmful effects to sage grouse and mule deer, spring trailing should be done as late as possible and still allow for the cattle to be on the base property by the April 15 deadline.

3. Unavoidable Impacts

The loss of some vegetation and the deterioration of wildlife habitat along the trail and each overnight stop is unavoidable.

4. Short and Long Term Effects on Productivity

The long and short term effects of resting the existing trail will greatly enhance the productivity of the range, particularly the white sage areas. The short term effects of use along the proposed trail will cause some deterioration of the range on the trail. In the long run, some habitat and vegetation production may be lost along the trail.

5. Irreversible and/or Irretrievable Commitments of Resources

The only irretrievable commitment of resources would be the materials, fuel and manpower used to construct the holding pens.

B. Trailing Alternative

To trail south along the existing trail in the fall and return on the proposed trail in the spring the second year after the decision is final.

1. Anticipated Impacts

   The impacts would essentially be the same as for the proposed action, with two major changes. First, the white sage along the existing trail would not have as much time to recover from past overutilization. Secondly, some of the pressure would be removed from the proposed trail by reducing the use to once a year.

2. Mitigating Measures

   The impact on the white sage can be sustantially lessened by allowing use along the existing trail like that along the proposed trail. This would mean establishing sites to feed, water and bed down the livestock, preferrably not in the white sage associations. The drift would have to be contained as much as possible, and the cattle moved a certain distance each day. The mitigating measures for the trailing alternatives would be the same as those discussed for the proposed action.

3. Unavoidable Impacts

   The loss of wildlife habitat and forage along a trail that is used every year is unavoidable. Also, there could be negative impacts from loss of habitat on nesting non-game birds, wintering mule deer herds and sage grouse.

4. Short and Long Term Effects on Productivity

   The productivity would be affected much the same as in the proposed action. One exception is that the long term effects will not be as detrimental to the proposed trail area nor as beneficial to the white sage associations along the existing trail.

5. Irreversible and/or Irretrievable Commitments of Resources

There are no irreversible or irretrievable commitments of resources.

C. No Action Alternative

1. Anticipated Impacts

Continuous use of the existing trail will allow its present range condition to deteriorate, probably at an accelerated rate. Undesirable species will continue to invade the white sage associations. White sage plants in low vigor will not survive. Reproduction of these plants will be scarce.

2. Mitigating Measures

The "Proposed Action" or the "Trail Closure Alternative" would mitigate the anticipated impacts of the "No Action Alternative".

3. Unavoidable Impacts

Without wild horse management range condition may continue to deteriorate or stablize itself depending upon the intensity of wild horse utilization.

4. Short and Long Term Effects on Productivity

Short term effects will be the continued deterioration of range condition, the continued increase of invader species, loss of top soil, loss of wildlife habitat and a general downward trend in watershed condition.

The long term effect is the possible loss of potential to improve range and watershed condition.

5. Irreversible and/or Irretrievable Commitments of Resources

If range condition continues to deteriorate, undesirable species continue to invade, and wind and water erosion continues unchecked, the potential for improvement of both range and watershed condition may be lost.

D. Trail Closure Alternative

This alternative is so close the respective portion of the Duckwater Unit, used for trailing by the Nevada Cattle Company, to all livestock trailing and require the permittee to haul livestock for a minimum of two years.

1. Anticipated Impacts

Negative impacts on vegetation are not anticipated during the two year minimum period. The vigor of existing white sage would improve. Total forage production would increase, some reproduction of vegetation would become established, and total ground cover would increase. The rate of downward trend of range and watershed condition would be reduced and possibly stabilize itself. This will be dependent upon climatic conditions and management of the wild horse herd.

Hauling livestock may create excess of fugitive dust and cause excessive wear on existing roads. The additional expense to the permittee for livestock transporation will be detrimental to the normal operation.

2. Mitigating Measures

Mitigating measures would be to haul only on dry gravelled roads or paved roads.

3. Unavoidable Impacts

The additional expense to the permittee.

4. Short and Long Term Effects on Productivity

Short term effects will be an overall improvement in range and watershed condition.

Long term effects are dependent upon management practices employed upon termination of the trail closure.

5. Irreversible and/or Irretrievable Commitment of Resources

Consumption of fuel used to haul livestock would be an irretrievable commitment of a resource.

E. Haul and Trail Alternative

This alternative is to haul cattle north in the spring and trail cattle south on the proposed trail in the fall.

1. Anticipated Impacts

Impacts on roads and additional expenses to the operator are much the same as discussed under the "Trail Closure" alternative. The range condition along the proposed trail will not deteriorate as rapidly as if it were receiving both spring and fall use. The white sage associations would respond favorably to complete rest during the spring.

2. Mitigating Measures

Mitigating measures are the same as those discussed under the "Trail Closure" alternative.

3. Unavoidable Impacts

The additional expense to the permittee.

4. Short and Long Term Effects on Productivity

Short term effects will be a slight downward trend of range condition along the proposed trail. Range and watershed condition will improve along the existing trail.

Long term effects are dependent upon management practices employed upon termination of the spring hauling requirement.

5. Irreversible and/or Irretrievable Commitment of Resources

The fuel consumed in transporting livestock would be an irretrievable commitment of a natural resource.

IV. MFP REVIEW

There are no conflicts with the MFPs of either the Battle Mountain or Ely District.

V. PERSONS, GROUPS AND GOVERNMENT AGENCIES CONSULTED

Nevada Cattle Company

John Coble, Rancher
Elliot Siegel, Ranch Manager

Joe Fallini, Rancher
Julian Goicoechea, Rancher
Al Steninger, Range Consultant

Nevada Department of Wildlife
Salute, Inc., Contractor Eureka County, NV Soil Survey

VI. INTENSITY OF PUBLIC INTEREST

The intensity of public interest concerning this EA is Relatively high. There have been three congressional inquiries, all of which are on file, along with the official BLM responses, at the Battle Mountain District Office.

VII. LIST OF PREPARERS AND PARTICIPATING STAFF

Team Leader: Kelly M. Madigan Date: Jan. 4 1980
Kelly M. Madigan
Environmental Coordinator,
Battle Mountain District Office

Writers

Battle Mountain District — Sections Prepared

Fish Creek Ranch

Richard L Depaoli — Date Jan 4, 1980
Richard Depaoli — Livestock and
Supervisory Range — Vegetation
Conservationist

Joseph A Deschamps — Date Jan. 10, 1980
Joe Deschamp — Wild Horses
Range Specialist

Patrick Welch — Date Jan 11, 1980
Patrick Welch — Cultural
Archaeologist — Resources

Mark Phillips — Date 11 Jan 1980
Mark Phillips — Wildlife
Wildlife Biologist

Cheryl Lane — Date Jan 4, 1980
Cheryl Lane — Soils/
Soil Scientist — Topography

Ely District

Duckwater Trail

Kathy Kushler — Date 1/8/80
Kathy Kushler — Livestock and
Range Conservationist — Vegetation

Mark Perkins - District Wildlife Bio. — Date 1/8/80
Mike Perkins — Wildlife
for Wildlife Biologist

VIII. APPENDICIES

Appendix 1
Map A

FISH CREEK RANCH OPERATION

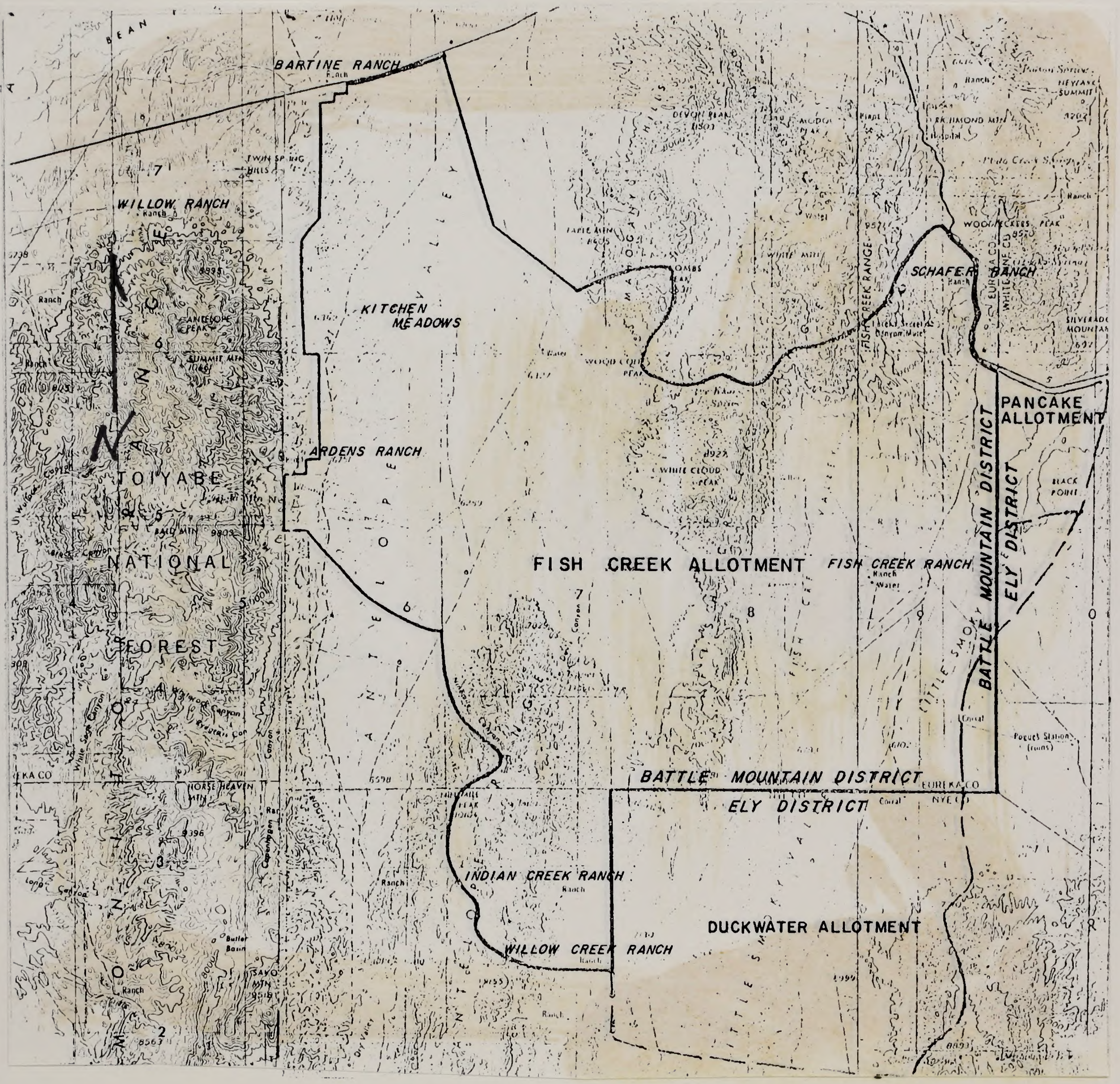
BATTLE MOUNTAIN DISTRICT

- Public Land
  - Fish Creek Ranch Allotment

- Private Land
  - Bartine Ranch
  - Willow Ranch
  - Kitchen Meadows
  - Ardens Ranch
  - Indian Creek Ranch
  - Willow Creek Ranch
  - Fish Creek Ranch
  - Schafer Ranch

ELY DISTRICT

- Public Land
  - Duckwater Allotment
  - Pancake Allotment


BARTINE RANCH
WILLOW RANCH
KITCHEN MEADOWS
ARDENS RANCH
TOIYABE
NATIONAL
FOREST
FISH CREEK ALLOTMENT
FISH CREEK RANCH
SCHAFER RANCH
PANCAKE ALLOTMENT
BATTLE MOUNTAIN DISTRICT
ELY DISTRICT
INDIAN CREEK RANCH
WILLOW CREEK RANCH
DUCKWATER ALLOTMENT
FISH CREEK RANGE
WHITE CLOUD PEAK
BLACK POINT
TWIN SPRING HILLS
ANTELOPE PEAK
SUMMIT MTN
HORSE HEAVEN MTN
EUREKA CO
NYE CO
WHITE PINE CO
WOODPECKERS PEAK
SILVERADO MOUNTAIN
DEVON PEAK
Little Smoky Valley
Fish Creek Valley
Antelope Valley

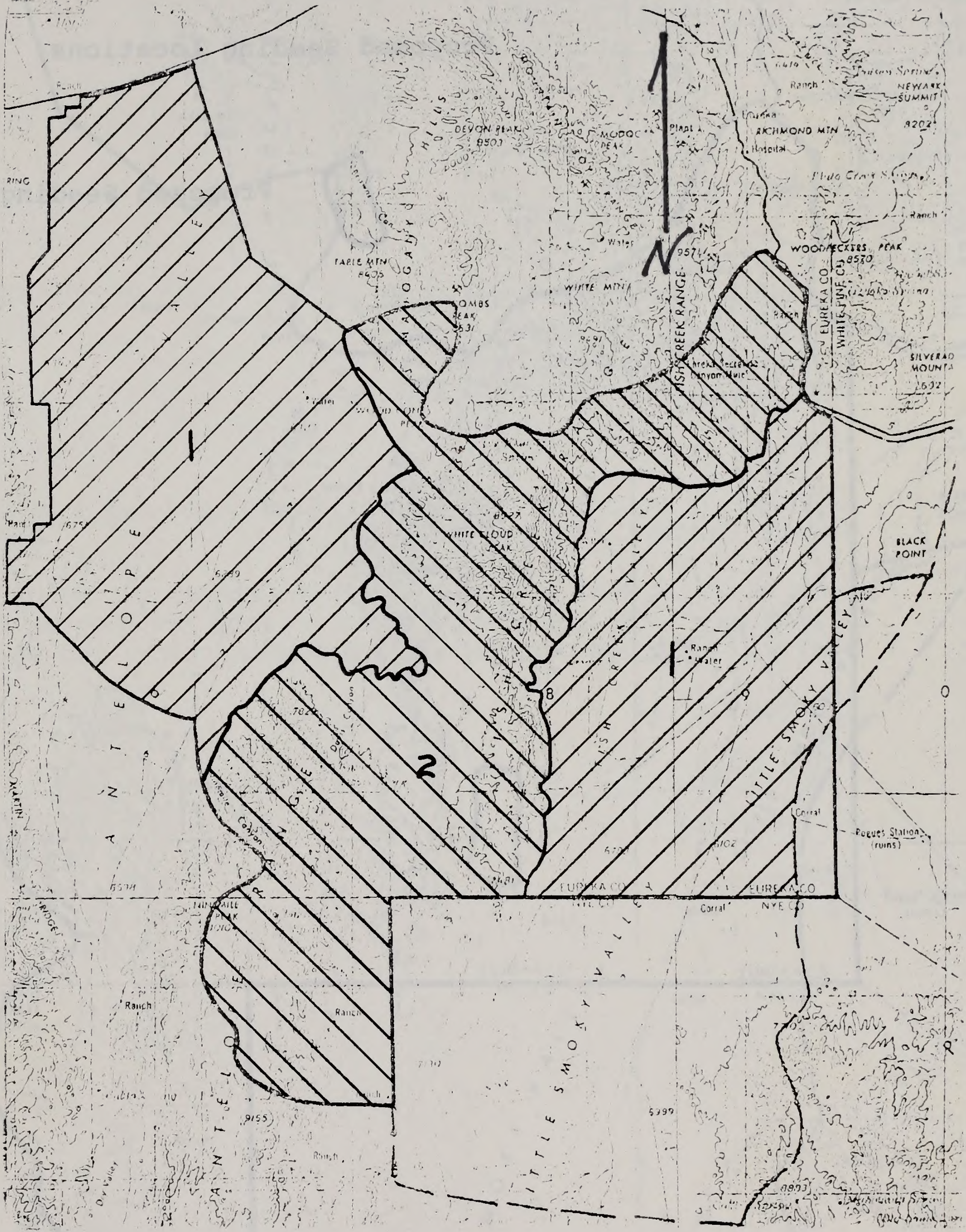
Appendix 2
Map A

Fish Creek Ranch Allotment

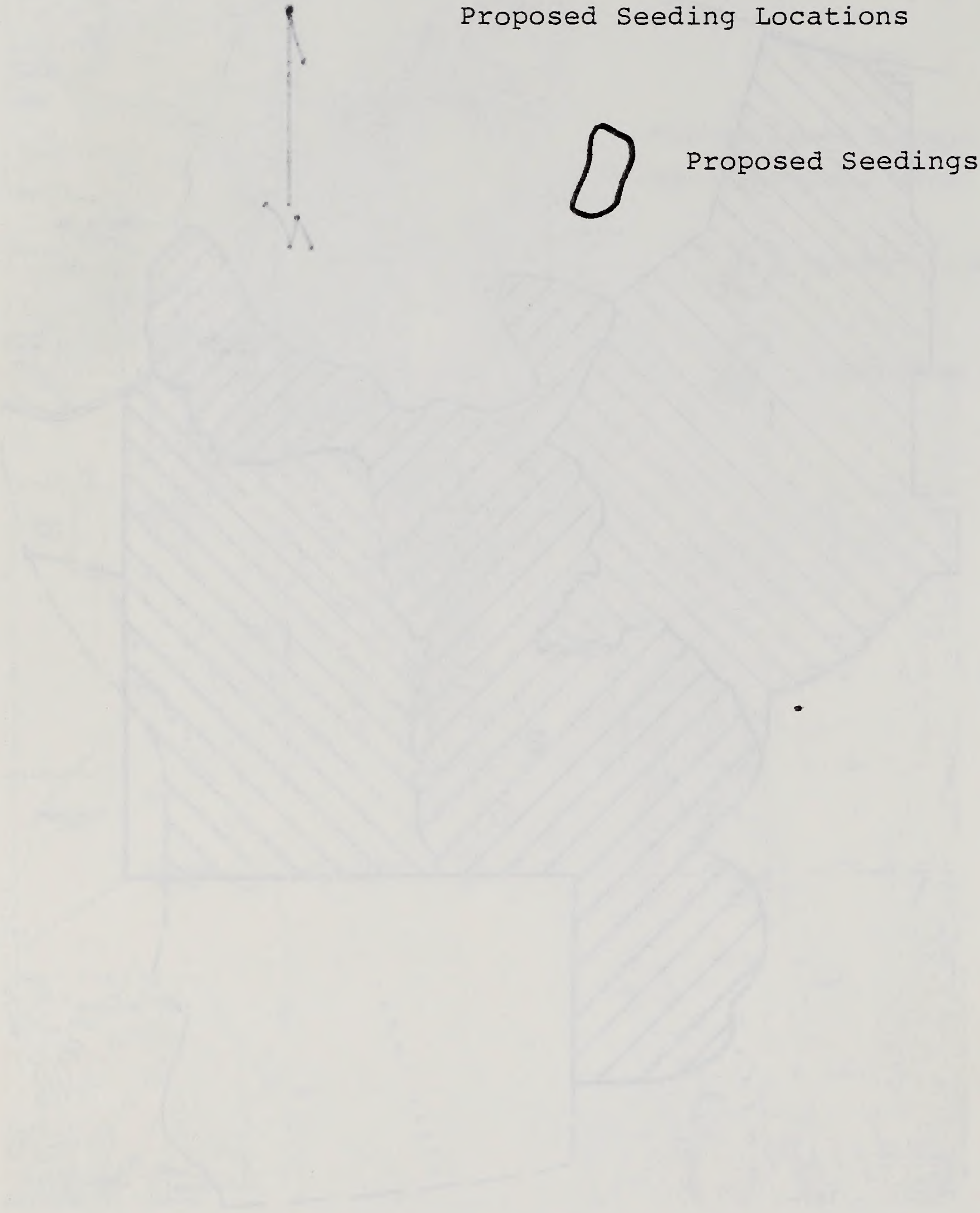
Spring/Summer/Fall Ranges

1 Spring/Fall Range

2 Summer Range

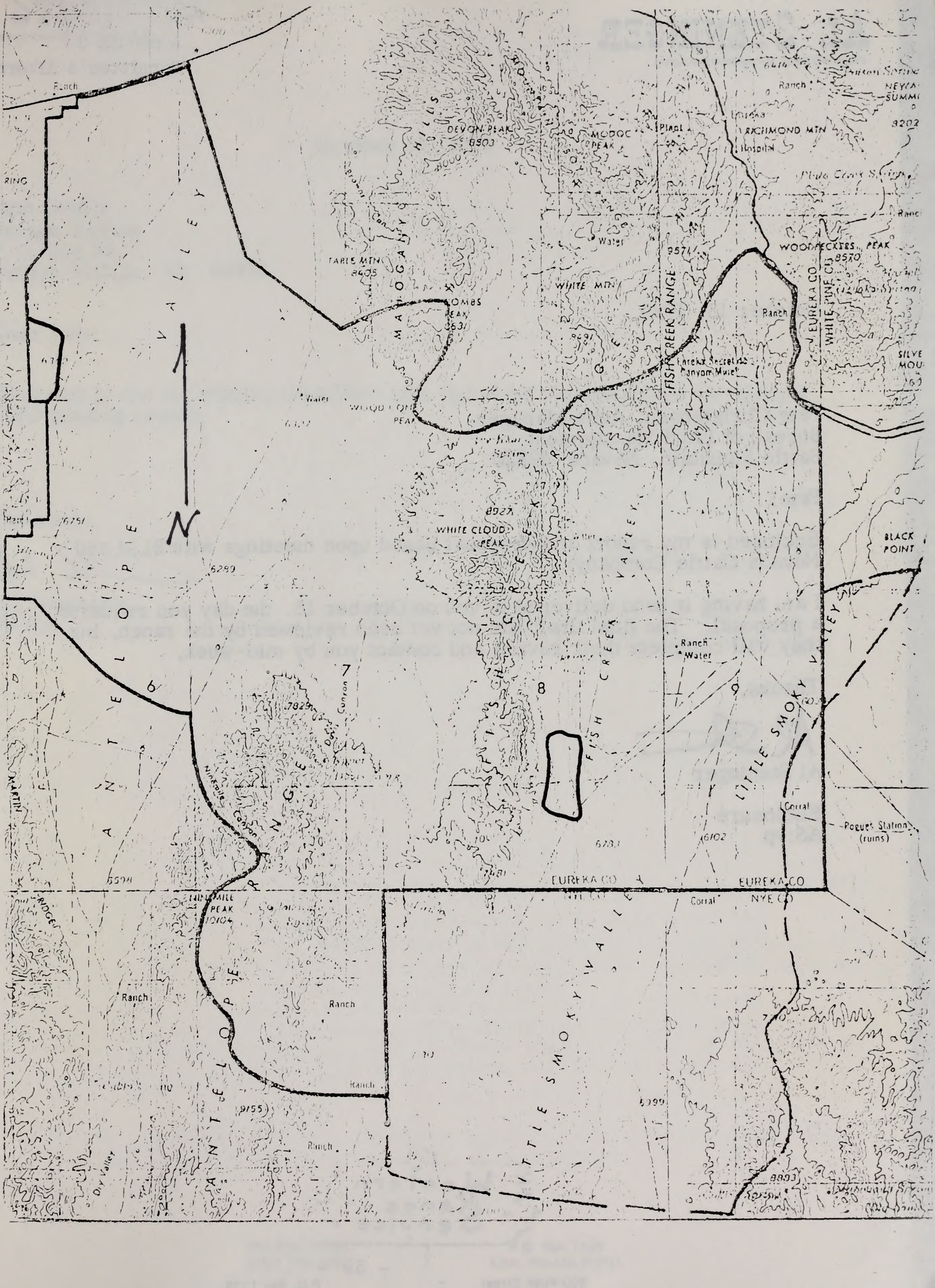

N
1
1
2
DEVON PEAK
MODOC PEAK
RICHMOND MTN
NEWARK SUMMIT
WOODPECKERS PEAK
TABLE MTN
WHITE MTN
FISH CREEK RANGE
EUREKA CO.
WHITE PINE CO.
SILVERADO MOUNTAIN
WHITE CLOUD PEAK
BLACK POINT
ANTELOPE VALLEY
ANTELOPE RANGE
FISH CREEK VALLEY
LITTLE SMOKY VALLEY
EUREKA CO.
NYE CO.
Pogues Station (ruins)
NINEMILE PEAK
Ranch
Corral

Appendix 2
Map B



Proposed Seeding Locations

Proposed Seedings


N
ANTELOPE VALLEY
MAHOGANY HILLS
DEVON PEAK 8503
MODOC PEAK
TABLE MTN 8405
COMBS PEAK 8631
WHITE MTN
WOODPECKERS PEAK 8570
RICHMOND MTN
NEVADA SUMMIT
FISH CREEK RANGE
EUREKA CO
WHITE PINE CO
Eureka Secret Canyon Mine
WOOD CONE PEAK
WHITE CLOUD PEAK
8927
FISH CREEK VALLEY
LITTLE SMOKY VALLEY
BLACK POINT
6
7
8
9
ANTELOPE RANGE
7829
6299
6751
6598
6233
6102
Pogues Station (ruins)
Corral
Ranch
Water
EUREKA CO
NYE CO
NINEMILE PEAK 10104
9155
6999
8893
Dry Valley
Ranch
RING
SILVER MOUNTAIN

AL STENINGER
Ranch and Range Management Consultant

Appendix 3
Permittee's Alternative

October 13, 1979

Pete Christensen, Area Manager
Bureau of Land Management
Battle Mountain, Nevada 89820

Pete:

Enclosed is my report and proposal based upon meetings with BLM and Nevada Cattle Company.

I am having it hand delivered to you on October 15, the day you requested a proposal. The final draft has not yet been reviewed by the ranch, but they will complete their review and contact you by mid-week.

Thanks,

Al Steninger

Enclosure
AS:vp

Western Range Service

990 Fifth Street
P.O. Box 1328

AL STENINGER
Ranch and Range Management Consultant

October 12, 1979

John Cobble
Valiant Farms
P. O. Box 38
Incline Village, NV 89450

Dear John:

Enclosed in the PROPOSED GRAZING USE PLAN for Nevada Cattle Company's 1980 grazing season.

Sincerely,

Al Steninger
AS:ks

990 Fifth Street
(702) 738-4007

P.O. Box 1328
Elko, Nevada 89801

AL STENINGER
Ranch and Range Management Consultant

October 12, 1979

Pete Christensen, Area Manager
Bureau of Land Management
Battle Mountain, NV 89820

NEVADA CATTLE COMPANY
PROPOSED GRAZING USE FOR THE 1980 GRAZING SEASON

Pete:

On September 19, 1979 a meeting was held at Fish Creek Ranch with representatives of : Nevada Cattle Company; Bureau of Land Management for Battle Mountain District Office, Shoshone Resource Area, Tonopah Resource Area, and the Ely District and Area office; Tonopah and Shoshone Area District Advisory Board members; and the Tonopah Range Committee.

The purpose of the meeting was to discuss grazing problems in connection with: (1) The overpopulation of feral horses in the Shoshone Resource Area; (2) Fish Creek - Sand Springs wash range that is used spring and fall for the movement of Nevada Cattle Company between winter and summer ranges; (3) Antelope and Fish Creek Valleys.

I represent the Tonopah Range Committee as a private range consultant. Nevada Cattle Company is a member of the Range Committee group. This letter is a proposal on their behalf. We suggest the following modification of the yearlong cattle grazing operation for the 1980 grazing season to provide a first year livesto grazing treatment to cope with the uncontrolled horse population and a long term proposal for grazing in the Fish Creek - Sand Springs Wash.

THE HORSE PROBLEM

The horse population for the entire range area of Nevada Cattle Company (NCC) is estimated by ranch management to be approximately 2000 head. The Bureau has indicated a population of approximately 150 head would be a reasonable number for the area.

Since the horses are free to move and graze without management constraint or co population growth an adverse impact is occurring on the rangelands. Control of th horses is essential for effective resource management of the area. Livestock grazing is the only tool presently available for range management.

Western
Range
Service

990 Fifth Street
(702) 738-4007

P.O. Box 1328
Elko, Nevada 89801

FISH CREEK - SAND SPRINGS WASH

The area from South of Fish Creek Ranch along the bottom of the valley extending southward to Sand Springs has customarily been used both spring and fall as the bulk of the 4000 to 5000 ranch herd migrate between summer and winter range. Livestock water is limited through the area and water hauling has been practiced along the route.

The white sage areas along the customary migration route are not thriving with the customary pattern of grazing.

A system of grazing in the area was worked out on September 19th which should provide a successful grazing treatment and is described below.

Establish two area of livestock migration to be referred to as the West Route which follows the road from Fish Creek Ranch to Willow Creek Ranch then south to Sand Springs Unit on the west side of the valley and the East Route which follows the wash.

Projected Use of Migration Routes

Season	Year(s)	Route
Fall	1979	West
Spring	1980	West
Fall	1980, 81, etc.	East
Spring	1981, 82, etc.	West

The planned pattern of grazing use will provide a grazing treatment compatible with the vegetation on both routes, spring use on the foothills and fall use on the white sage flats.

It was agreed that BLM would locate feed ground locations along the west trail during October 1979 so that the cattle could be held together during the move and enable the migration to be completed from Fish Creek Ranch to Sand Springs within a two week period.

It is proposed that during 1980 BLM and NCC should work together to locate sites for construction of 5, 40 acre holding pens on each route so that cattle could be confined in the pens during the migration movement.

On the West route, the eight mile seeding and the Willow Creek Ranch could provide two of the five holding areas.

Wells or water hauling will provide livestock water along the routes.

BLM will accompany the cattle movement activities during the fall of 1979 and spring of 1980 to assess the effectiveness of the program.

FISH CREEK - ANTELOPE VALLEYS

The white sage in Antelope Valley and southern Fish Creek Valley is in a reduced state of vigor, primarily due to excessive horse grazing use. The areas of Fenstemacher Wash, Fish Creek Basin south of Fish Creek Ranch, and the 3 C well are of special concern. An environmental assessment of the problem is presently in progress. BLM has requested that livestock grazing be deferred until mid-June in Fish Creek and Antelope Valleys. After mid-June livestock grazing may commence in the foothills and mountain area of the valleys to provide grazing deferment of the white sage flat areas of special concern until mid-September.

NCC proposes that a special grazing program described in this report be utilized during the 1980 grazing season to provide the livestock grazing treatment reques by BLM. NCC also proposes that water holes be fenced and alternated between seasons or years along with the wells to provide grazing deferment or rest from all grazing animals. NCC strongly proposes and recommends that an effective program of horse population control be initiated immediately and will participate and cooperate with BLM to accomplish the horse control.

EVALUATION OF THE 1980 PROGRAM

A cooperative effort between BLM, NCC, and the Tonopah Range Committee to evaluate the effectiveness of the proposed 1980 program and the impact of the horse population is essential.

In the fall of 1980 a cooperative assesment of the programs effectiveness will provide the necessary information to plan the 1981 grazing program.

THE 1980 GRAZING PROGRAM

During 1980, 4000 cows and bulls plus 600 replacement heifers are proposed to graze the public and private lands in a manner depicted on the attached cattle flow chart.

The proposal satisfies BLMs request for 1980 grazing use. It provides maximum use of the existing base properties and in a manner to best handle the grazing animal under the circumstances.

The various private and federal grazing units are briefly discussed with regard to the 1980 proposal.

PRIVATE

Hot Creek Ranch, Kitchen Meadows, and Fish Creek Ranch -- received heavy us during 1979 to provide rest for Antelope Valley from livestock grazing. The 1979 plan was to graze Antelope during the late season, However, heavy horse use in Antelope resulted in cancellation of the fall cattle use in Antelope and an extension of the grazing inside these areas to compensate for the loss. This resulted in no fall pasture available during the gathering, branding, and fall cattle work. The normal winter hay supply must now be used in the fall of 1979.

The proper use of these properties are for spring and fall pasture to gather, bran and work the cattle.

These properties are proposed to be used in 1980 for spring and fall pattern for which they are best suited and most productive. Grazing intensity will be heavier than proper especially in Kitchen Meadows during the spring and early summer.

Cold Creek Ranch -- Will carry about 300 more cattle in 1980 with major use during the late summer and early fall.

Harper, Willow, Hot Creek, and Lockers Ranches--
Will provide a combination of spring and fall pasture to provide the necessary deferment of use in Fish Creek and Antelope Valleys.

FOREST SERVICE

The U.S. Forest Service has indicated to NCC that earlier and heavier use will be permitted in 1980 as shown on the cattle flow chart.

BLM

Areas of Special Concern -- Including Fenstemacher wash, Fish Creek Basin and 3C well areas will be deferred from grazing in 1980, except for trailing through during cattle migration. Grazing use will be deferred in Antelope Valley and Fish Creek Valley until mid-June on the uplands, and until fall on areas of white sage flats grazed heavily in 1979.

Jack Rabbit, Lincoln Seeding and Grimes -- are in a grazing system, where not grazed in 1979 and are normally scheduled for 1980 use.

Eight Mile Seeding-- Will be deferred until May 1.

Nine Mile, Schaffer, Ratto, Secret, and Pleasant Valley -- will be deferred until June 10 to provide spring rest.

Stump and Well #4 -- were not grazed in 1979 and will provide one month of spring use and Stump will provide limited fall use.

Service

SUMMARY

A program of grazing has been proposed for 1980 which will shift grazing use to satisfy the grazing use treatments requested by BLM in Fish Creek Valley, Antelope Valley, and the Fish Creek - Sand Spring wash area.

A positive and cooperative monitoring and evaluation of the effectiveness of the 1980 program is essential to determine the impact of the horse use and effectiveness of the livestock grazing treatment.

Nevada Cattle Company will strongly support and cooperate with BLM to effect a program of horse control on their grazing areas.

Sincerely,

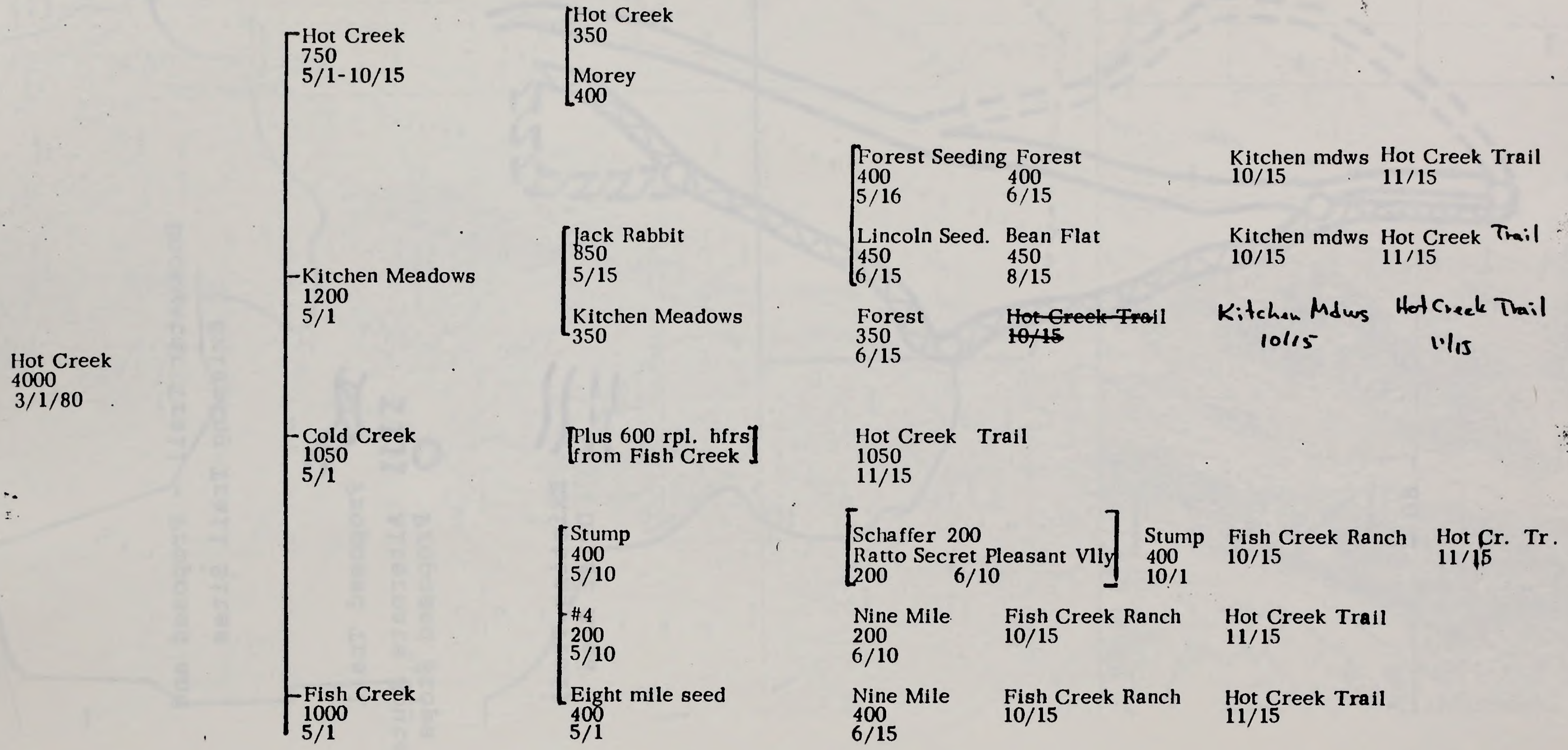
Al St

Al Steninger
AS:ks

Western
Range
Service

NEVADA CATTLE COMPANY
1980 PROPOSED GRAZING
OPERATION

CATTLE FLOW CHART

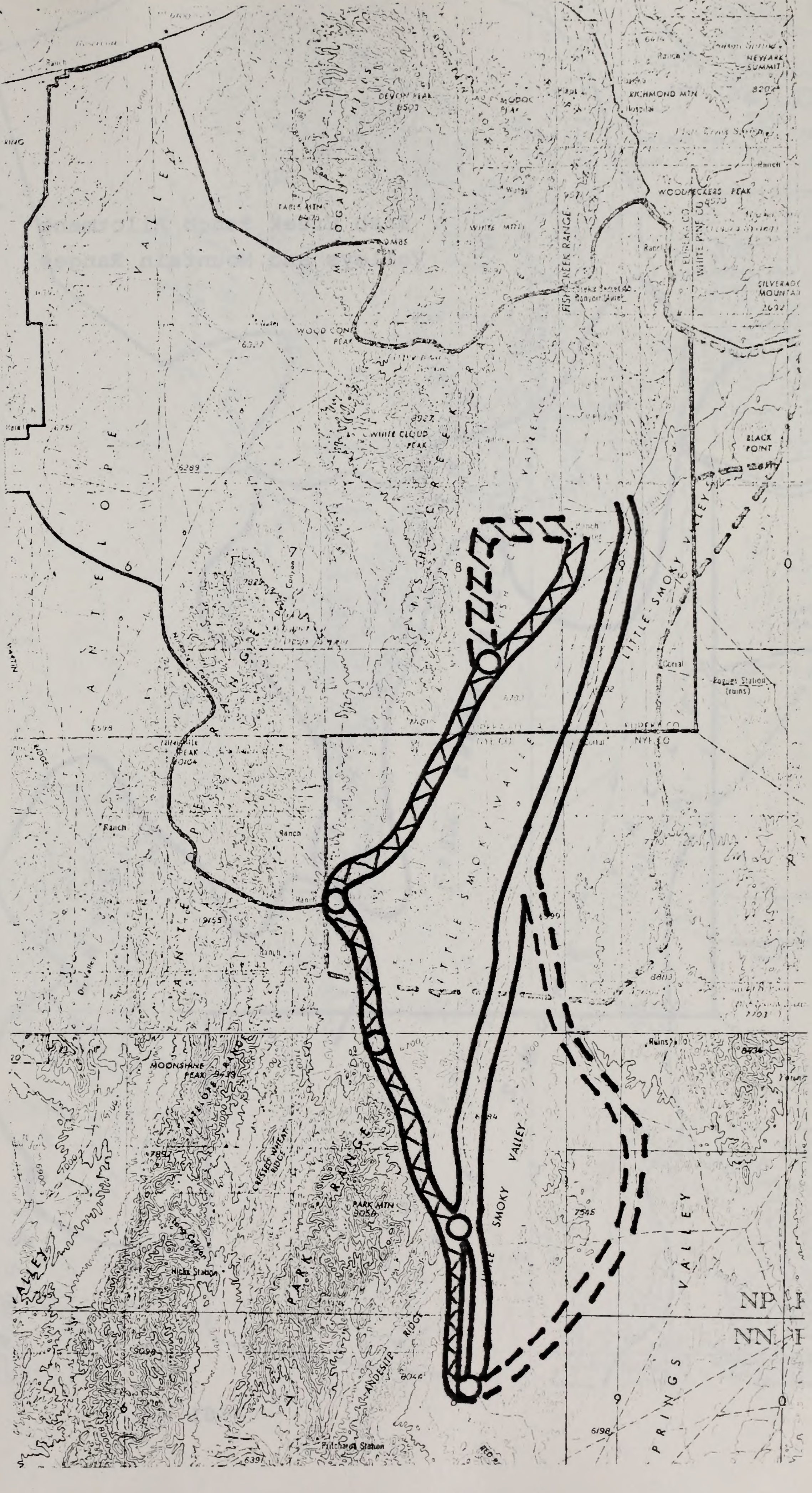


Appendix 4
Map A

Duckwater Trail - Proposed and Existing Trail Sites

▨ Proposed Trail
ʃʃʃʃ Alternate Route
○ Proposed Stops

≈ Existing Trail
- - - Drift Area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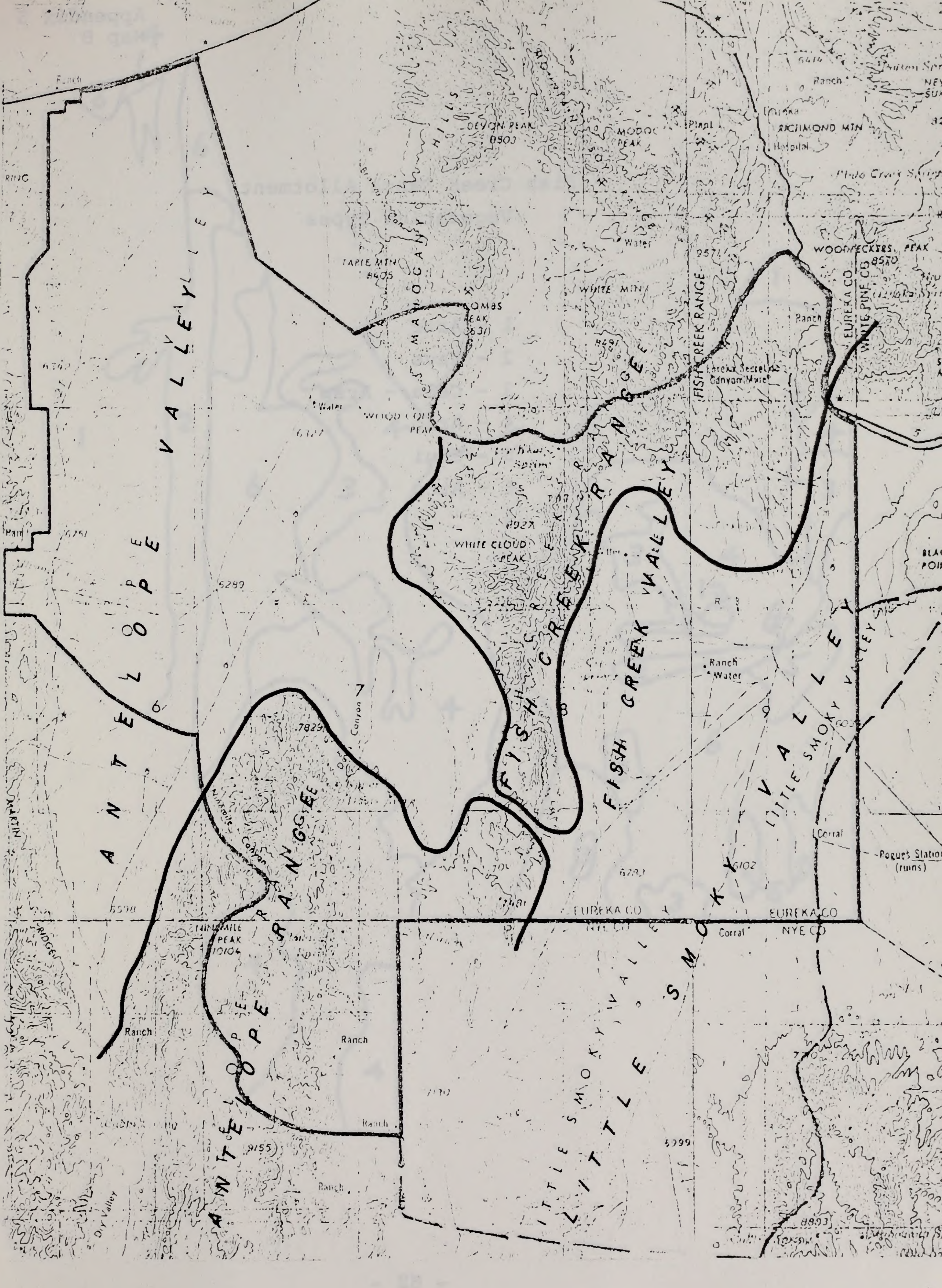
DEVON PEAK 8503
MODOC PEAK
RICHMOND MTN
NEWARK SUMMIT
WOODPECKERS PEAK
EUREKA CO
WHITE PINE CO
SILVERADO MOUNTAIN
TABLE MTN
MAHOGANY HILLS
WHITE MTN
WOOD CONE PEAK
FISH CREEK RANGE
WHITE CLOUD PEAK
BLACK POINT
LITTLE SMOKY VALLEY
ANTELOPE RANGE
NINEMILE PEAK 10104
Rogues Station (ruins)
EUREKA CO
NYE CO
MOONSHINE PEAK 9439
CRESSEY WIEAR RIDGE
PARK RANGE
PARK MTN 9056
Hicks Station
ANDESITE RIDGE
SMOKY VALLEY
VALLEY
SPRINGS
Pritchards Station
Ranch
Corral
NP
NN

Appendix 5
Map A

Fish Creek Ranch Allotment
Valleys and Mountain Ranges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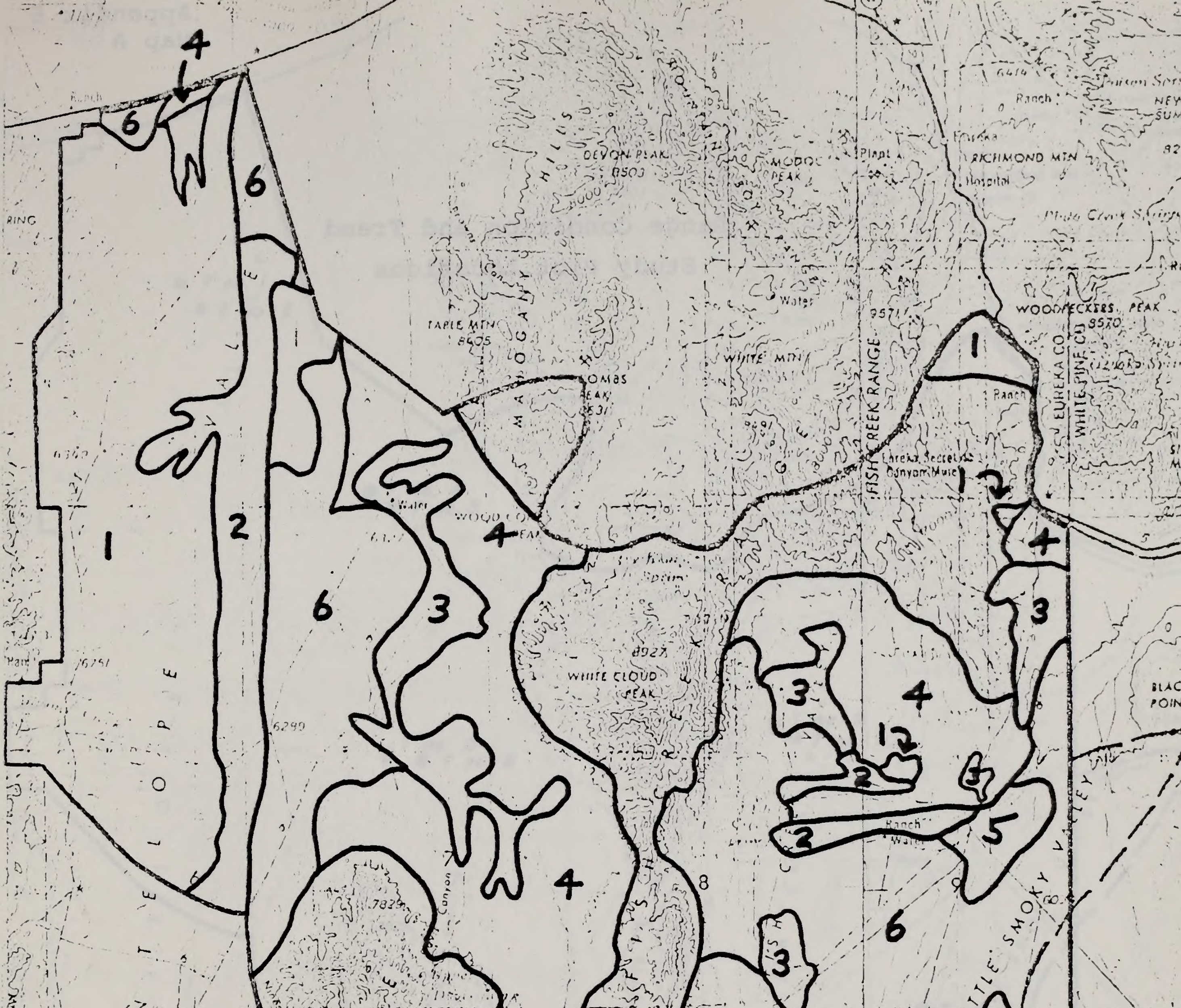
ANTELOPE RANGE
FISH CREEK RANGE
FISH CREEK VALLEY
LITTLE SMOKY VALLEY
LITTLE SMOKY VALLEY
MAHOGANY HILLS
DEVON PEAK 8503
MODOC PEAK
TABLE MTN 8405
COMBS PEAK 8631
WOOD CONE PEAK
WHITE MTN
WHITE CLOUD PEAK
8927
NINEMILE PEAK 10104
RICHMOND MTN
WOODPECKERS PEAK 8570
FISH CREEK RANGE
EUREKA CO
WHITE PINE CO
EUREKA CO
NYE CO
Eureka Secret Canyon Mine
Pogues Station (ruins)
Ranch
Water
Corral
Canyon
Ninemile Canyon
Dry Valley
7829
6299
9155
6102
6599
6251
6289
6327
9571
6
7
8
9
5

Fish Creek Ranch Allotment
Vegetation Types

1 - Artr
2 - Save
3 - Cela - Arsp
4 - Arno
5 - Chui
6 - Atco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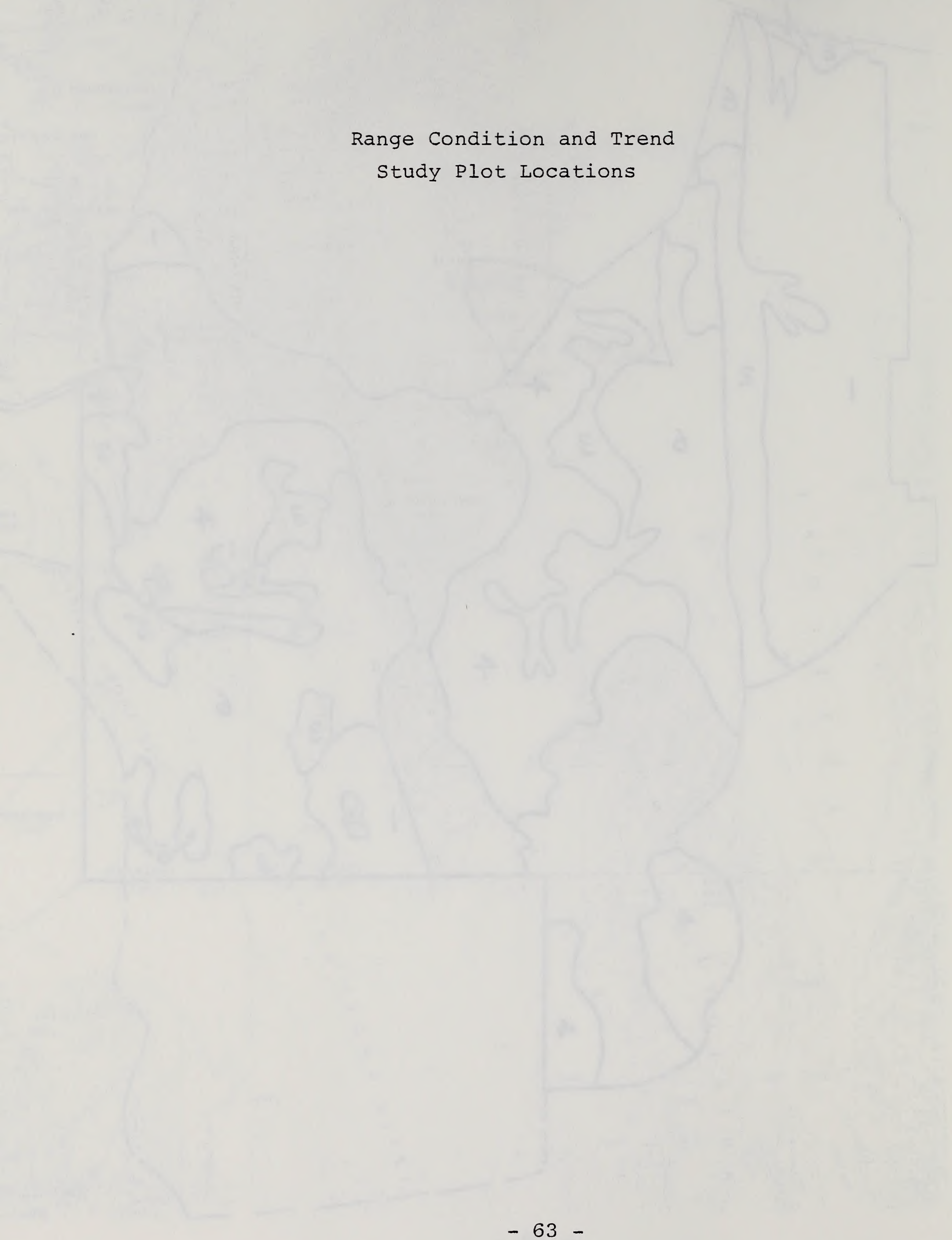
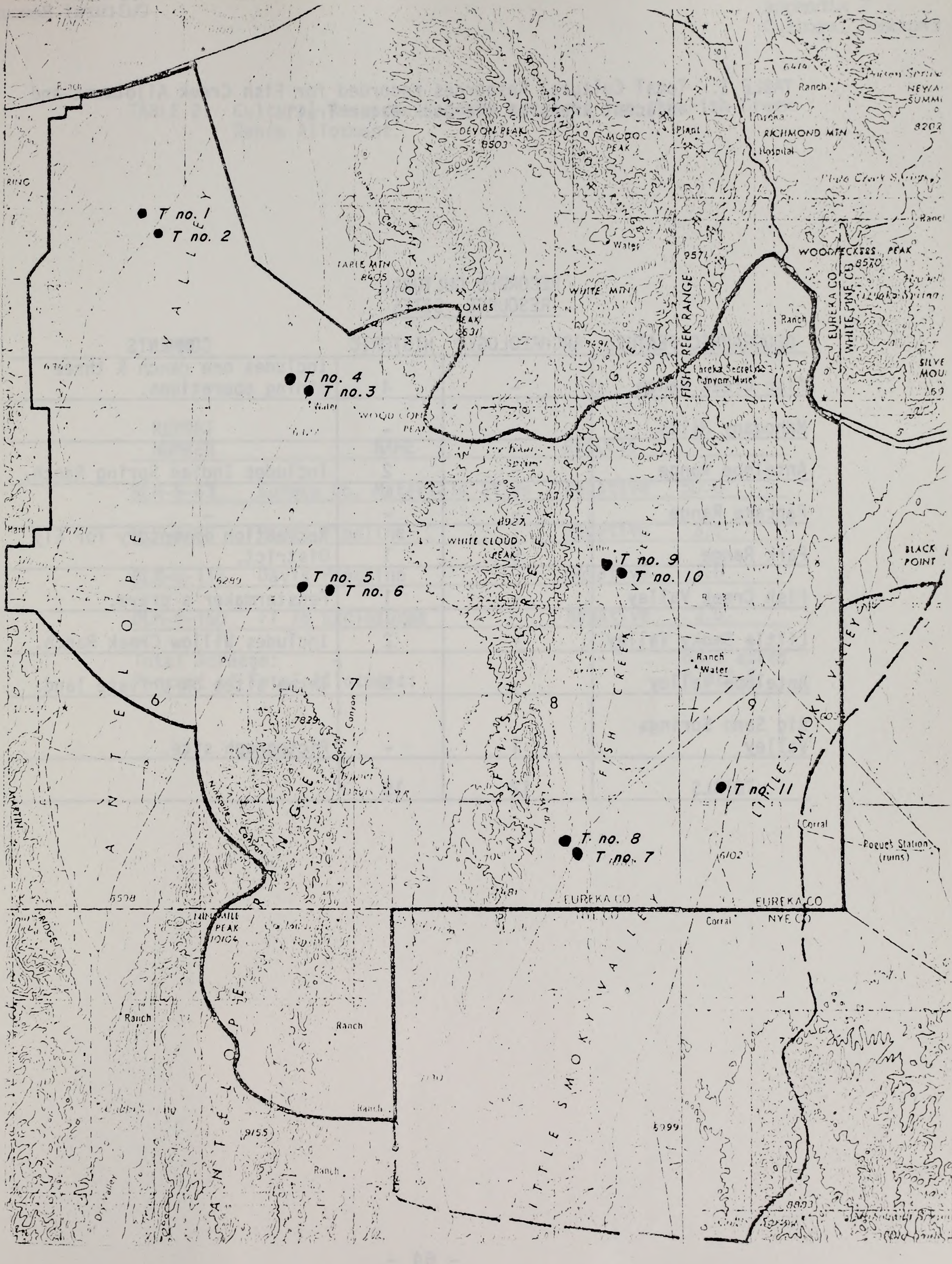
4
ANTELOPE VALLEY
ANTELOPE RANGE
FISH CREEK RANGE
LITTLE SMOKY VALLEY
MAHOGANY HILLS
DEVON PEAK 8503
MODOC PEAK
TABLE MTN 8605
COMBS PEAK 8531
WOOD CONE PEAK
WHITE MTN
WHITE CLOUD PEAK 8927
RICHMOND MTN
WOODPECKERS PEAK 8570
Eureka Secret Canyon Mine
NINEMILE PEAK 10104
Ninemile Canyon
Dry Valley
Rogues Station (ruins)
Corral
Ranch
Water
Hospital
EUREKA CO
NYE CO
EUREKA CO
WHITE PINE CO
MARTIN RIDGE

Appendix 6
Map A

Range Condition and Trend Study Plot Locations

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T no. 8
T no. 9
T no. 10
T no. 11
ANTELOPE VALLEY
MAHOGANY HILLS
DEVON PEAK 8503
MODOC PEAK
TABLE MTN 8605
TOMBS PEAK 8631
WHITE MTN
FISH CREEK RANGE
RICHMOND MTN
WOODPECKERS PEAK 8570
EUREKA CO
WHITE PINE CO
WHITE CLOUD PEAK 8927
FISH CREEK VALLEY
LITTLE SMOKY VALLEY
BLACK POINT
ANTELOPE RANGE
NINEMILE PEAK 10104
Poquet Station (ruins)
Corral
Ranch
Water
NYE CO
7
8
9

TABLE I. Total Cultural Resources recorded for Fish Creek Allotment and adjacent areas of the Duck Water Trail.

	RECORDED CULTURAL RESOURCE SITES		
GEOGRAPHIC FEATURE	ARCHAEOLOGIC	HISTORIC	COMMENTS
Fish Creek Range	-	4	Includes one ranch & three mining operations.
Mahogany Hills	-	-	-
Antelope Range	-	2	Includes Indian Spring Ranch.
Pancake Range	-	-	-
Park Range	9	1	Recreation inventory for Ely District.
Fish Creek Valley	-	1	Fenstermaker's grave.
Little Smoky Valley	-	2	Includes Willow Creek Ranch.
Antelope Valley	-	5	Three sites on private land.
Big Sand Springs Valley	1	-	Pictograph site.
TOTALS	12	15	

TABLE 2. Cultural Resource Reports prepared for the Fish Creek Ranch Allotment.

REPORT NUMBER	NAME	RESULTS	
BLM-6-63	Eureka Co. Materials Sites	Negative	50.0
BLM-6-86	Hicks Pipeline	Negative	3.6
BLM-6-111	Davis Pipeline	Negative	7.0
BLM-6-160	FY 78 Exclosures	Negative	3.0
Total Acreage:	-	-	63.6 acres
Percent of Total Allotment:			0.022 %

Bureau of Land Management
Library
Bldg. 50, Denver Federal Center
Denver, CO 80225

R'S CARD

OFFICE

DATE RETURNED

(Continued on reverse)